American
Cinematographer
International Journal of Motion Picture Photography and Production Techniques
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ON LOCATION WITH "SOMEWHERE IN TIME"

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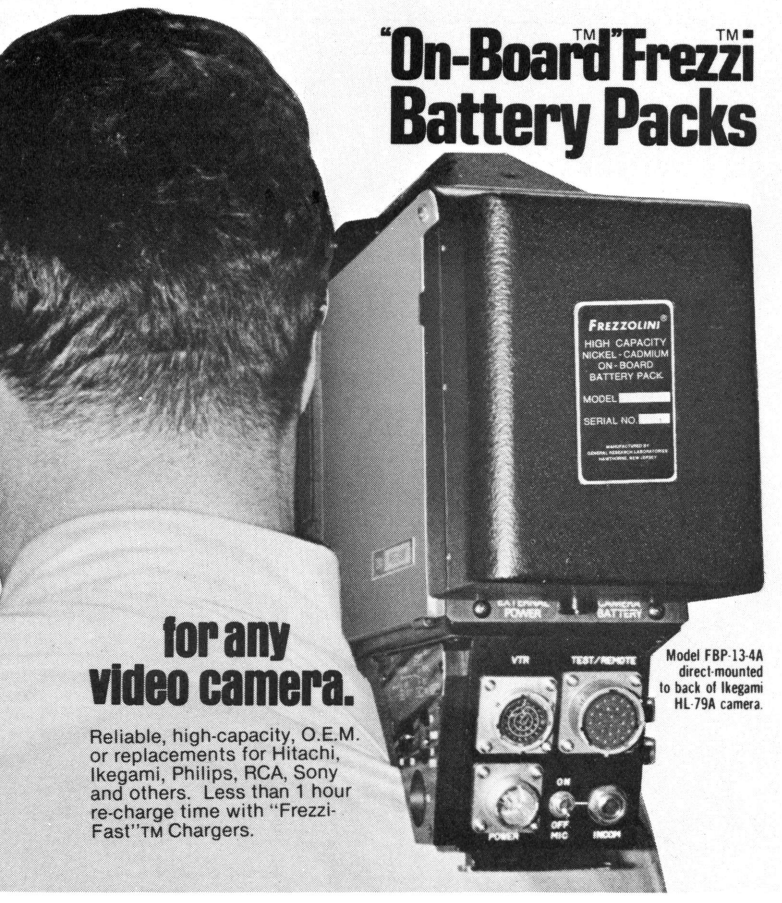

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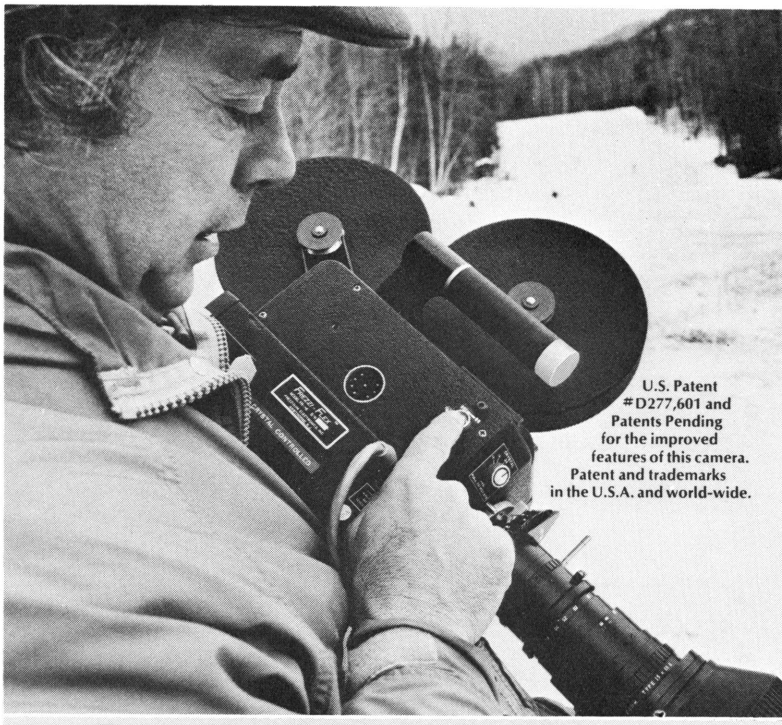

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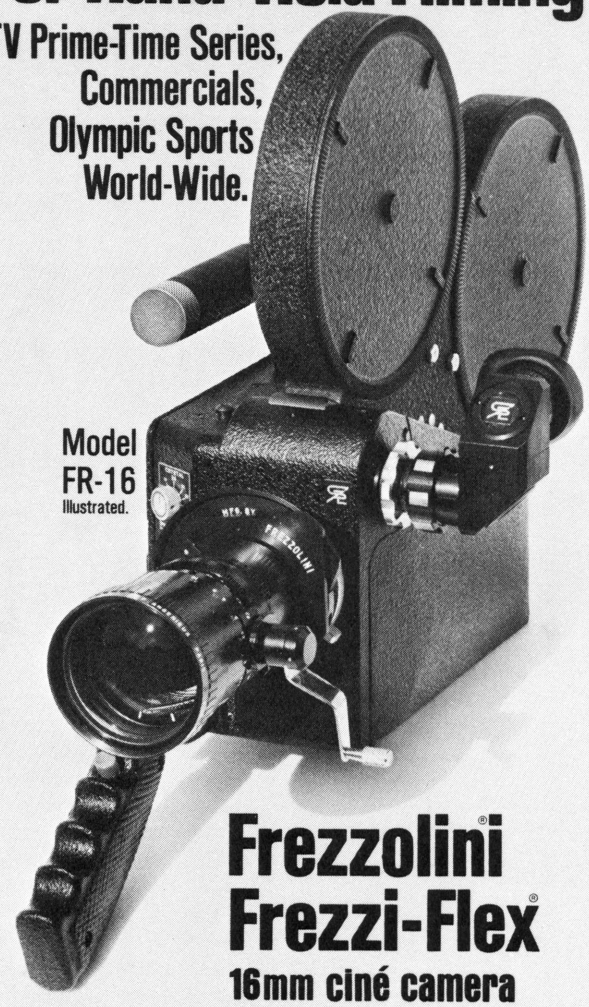

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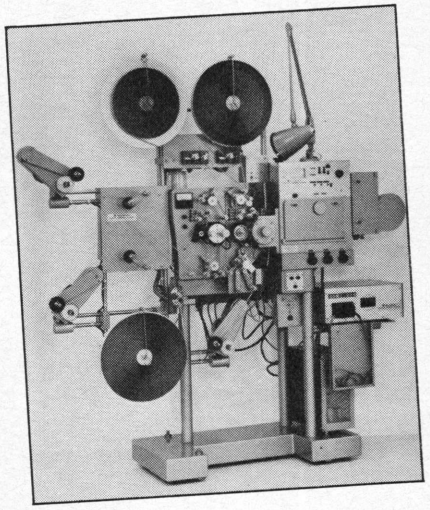

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1782 North Orange Drive
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JULY 1980 **VOL. 61, NO. 7**

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ON THE COVER: A scene from the Rastar/Universal production of SOMEWHERE IN TIME. Jane Seymour and Christopher Reeve, playing lovers separated by 67 years of time, finally meet and stroll together outside the stately Grand Hotel on Mackinac Island, Michigan, where the film was shot. It was directed by Jeannot Szwarc and photographed by Isidore Mankofsky, ASC.

AMERICAN CINEMATOGRAPHER, (ISSN 0002-7928) established 1920, in 61st year of publication is published monthly in Hollywood by ASC Holding Corp., P.O. Box 2230, Hollywood, California 90028. U.S.A. **SUBSCRIPTIONS:** U.S. $12.00; Canada, foreign, including Pan-American Union, $15.00 a year (remit International Money Order or other exchange payable in U.S.). **ADVERTISING:** rate card on request to Hollywood office.

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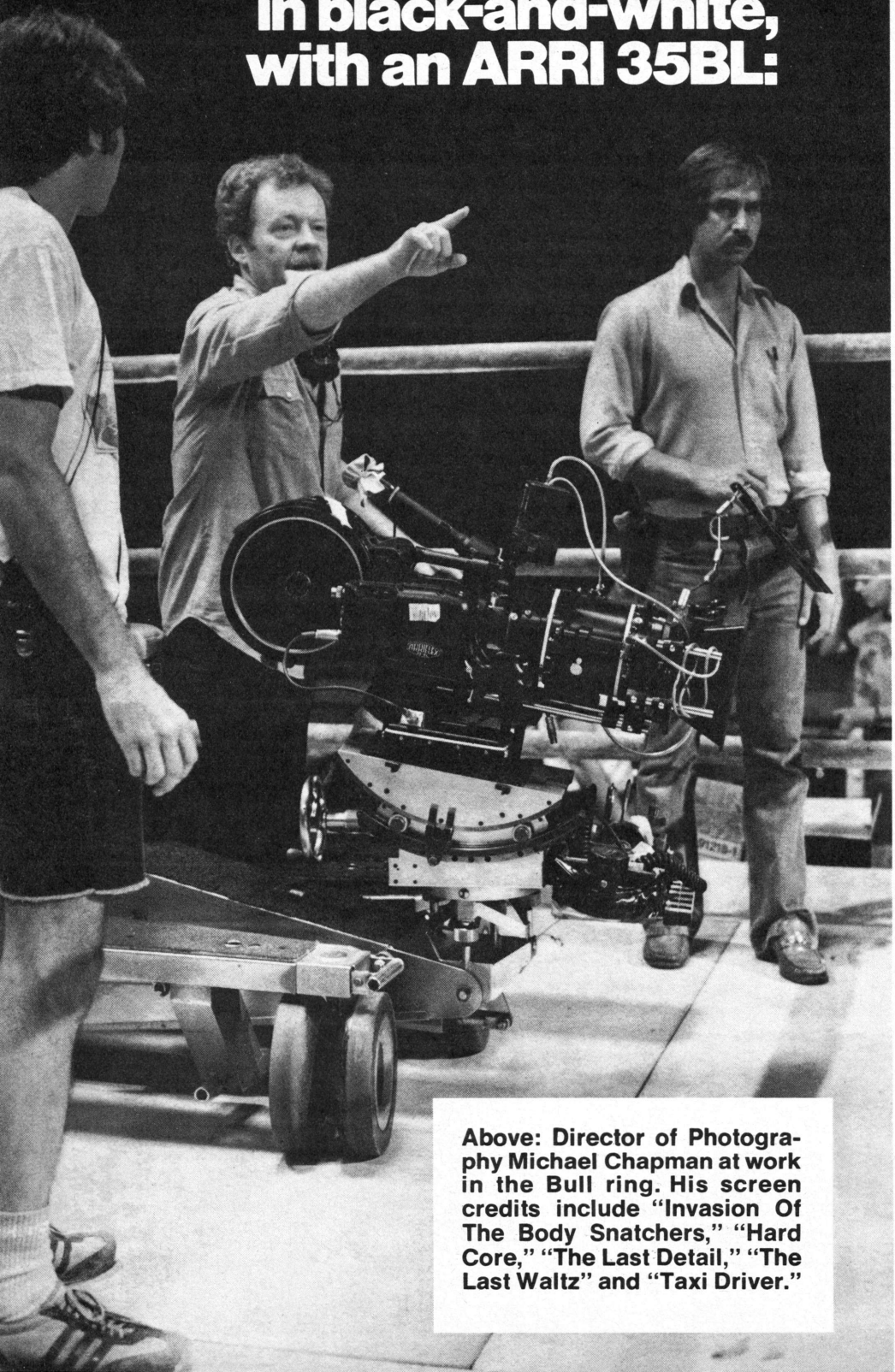
"The fight sequences are choreographed as though it were a musical."

Michael Chapman talks about shooting The Raging Bull (directed by Martin Scorsese) in black-and-white, with an ARRI 35BL:



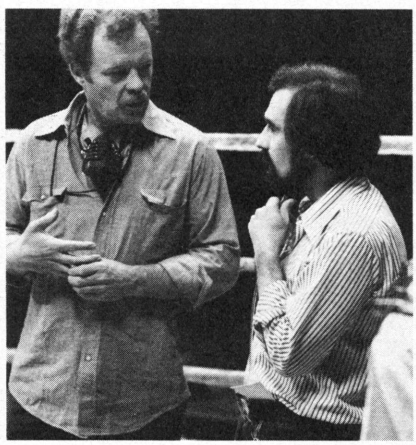
Above: Director of Photography Michael Chapman at work in the Bull ring. His screen credits include "Invasion Of The Body Snatchers," "Hard Core," "The Last Detail," "The Last Waltz" and "Taxi Driver."

It's about Jake LaMotta, a New York boxer who was Middleweight Champion in the Forties. *Raging Bull* is what the papers called him.

He's being played by Robert DeNiro, whose opponents in the film are all real boxers. Mr. LaMotta himself is acting as a technical adviser and has been on the set almost every day during the fight sequences.

Period stock

To add to the authenticity and period atmosphere, the film is being shot with Eastman Double X. "I had never used black-and-white before this job," says Michael Chapman. "I was apprehensive."

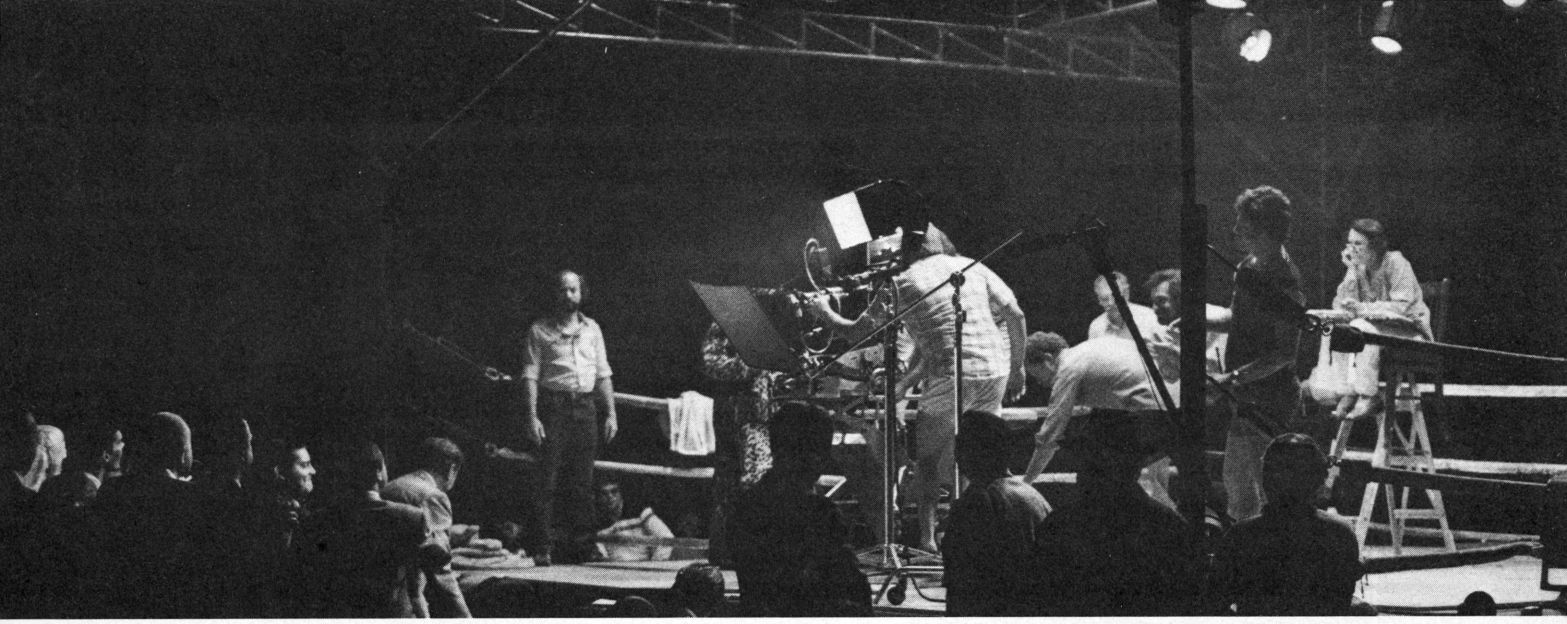


Director Martin Scorsese with DP Michael Chapman

"Before we started, I screened some black-and-white movies at MGM—*Double Indemnity*, *Salvatore Giuliano*. Even some Buster Keaton, because I remembered liking the simplicity. Separation *without* a rimlight."

Low ceilings

"We ran the usual tests; and I took a Polaroid onto the set with me, at first. I *still* think shooting black-and-white is more complicated. On some locations with low ceilings and nowhere to put the backlight, it can be difficult."



Shooting ringside spectators. Most fights are shot in real ring. Extra sets: rings that break apart, dividing ropes, one ring 40ft long (instead of 20ft), another that's not rectangular, for perspective distortion, *subjective* sense of what fighter experiences. 'Tobacco smoke' in the air is mineral oil, sprayed onto set for 8 weeks. Since it's a laxative, some of the crew wore masks.

"The choice of camera was mine," says Mr. Chapman. "I've been using the 35BL since *Taxi Driver*. For a realistic look on New York streets at night, we needed fast lenses."

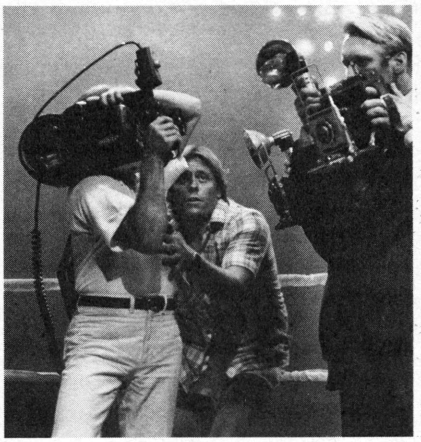
Accurate lenses

"After testing for *Taxi Driver*, we found the Zeiss set were the only accurate ones. The marked T1.4 *was* T1.4. Same thing stopped down. If it said T5.6 it was T5.6. They're superb lenses."

Feels good

"Two other things endear me to the 35BL: It's a marvellous camera to hand-hold. Sits right down low on your shoulder, balanced—like part of your body. *It feels good to use.*"

"The other thing I like is the 35BL's simplicity. It does everything I've ever needed—but the system is not intricate. And you can just grab three cases and go."



Operator Joe Marquette and 1st Asst. Dustin Blauvelt run around circle of "press photog." extras for downed boxer's groggy POV of ringside scene. 48 fps, with 16mm lens.

"The fights will be only about 20% of *Raging Bull*," says Mr. Chapman, "But they're the high points of the film—so we've spent about eight weeks shooting them."

"Marty (Scorsese) likes a baroque shooting style. Lots of moves, elaborately staged. Different camera speeds. There's a storyboard frame for *every shot in every fight*."

Baroque style

"Boxers constantly circle one another; and our camera never stops, either. 360° pans, crane shots...And every move—boxers *and* camera—is choreographed. Cut together, the fights all look like dances."

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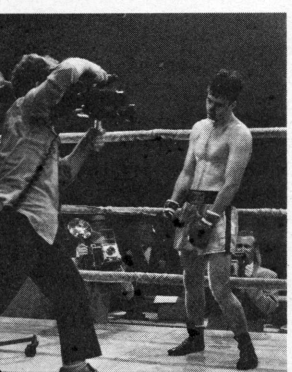
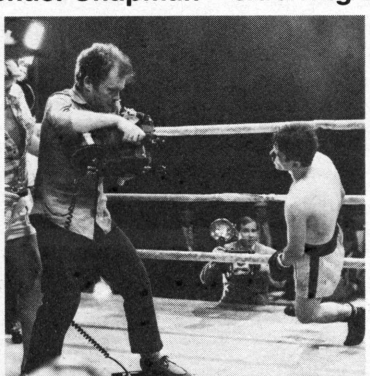
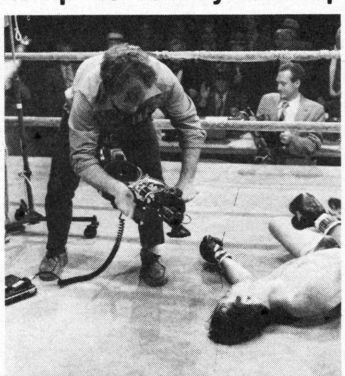
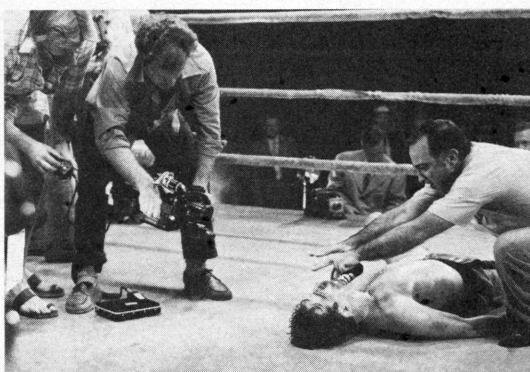
One of LaMotta's challengers (played by Kevin Mahon) gets knocked out. Michael Chapman hand-holds a 35BL running at 48 fps, 16mm lens. Closeup shots *inside* ring attempt to convey LaMotta's emotional POV, as opposed to newsreel or TV shot, spectator's POV outside ring.



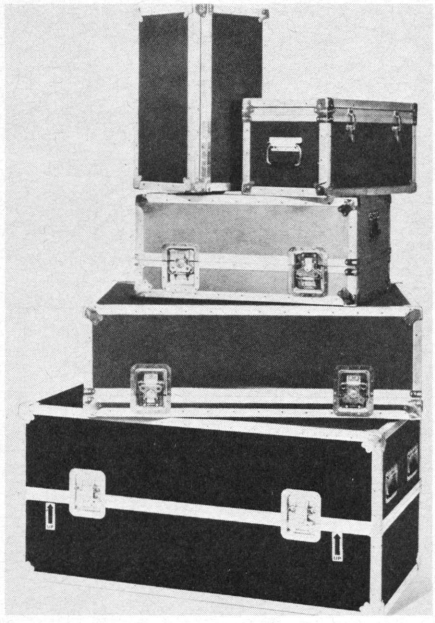






WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE



NEW LINE OF CUSTOM CASES INTRODUCED BY EXCALIBUR INDUSTRIES

Custom cases which have been specifically designed for shipping equipment and instruments are now available from Excalibur Industries.

According to John Gresch, director of marketing, the cases are applicable to a wide range of industries, such as aviation and aerospace, military, photographic, television, motion picture, audio/visual, marine, medical, lighting, theatrical, trade show and concert.

The cases are extremely durable, with a high strength-to-weight ratio, Gresch stated. They may be ordered in a variety of materials and finishes, including ABS on plywood, fiberglass on plywood, metal clad plywood, and carpeted, 3/4" plywood. All Excalibur cases feature reinforced metal corners and top quality, recessed hardware.

Cases are built to exact customer specifications, which can be outlined on worksheets supplied by the company. Worksheets may be obtained directly from Excalibur Industries, 12251 Foothill Blvd., Lake View Terrace, CA 91342; telephone (213) 899-2547.

•

NEW MINIATURIZED SNORKEL LENS AVAILABLE

A new and revolutionary light weight snorkel lens has been designed by Stephen Hajnal.

This is the first snorkel lens which has been miniaturized so that it may be used with hand-held cameras. Only 12 inches long and 40 ounces in weight, it can be mounted in any motion picture camera (35mm, 16mm, and Super-8) including Mitchell, Arriflex, Panavision, Eclair, etc. The Hajnal Snorkel will also mount on all models of television cameras, both studio and portable types. It may also be used with 35mm still cameras. Mounts and adapters are available for all these.

The lens possesses excellent optical quality. The types of photography available with the Hajnal Snorkel are limited only by one's imagination. Intricate table-top TV commercials have already been produced with this equipment mounted on RCA TK76 cameras and the 35mm Arriflex BL. The Snorkel accepts any prime lens in Arriflex mount from a focal length of 5.7mm on up and including all zoom lenses.

The Hajnal Snorkel is exclusively distributed worldwide by F&B/Ceco and may be seen at both offices—at 315 West 43rd Street, New York and 7051 Santa Monica Blvd., Hollywood, California. First introduced at the NAB in Dallas last March, the Snorkel is already being sold by a number of professional dealers in the United States, England, Hong Kong, Japan and in South America.

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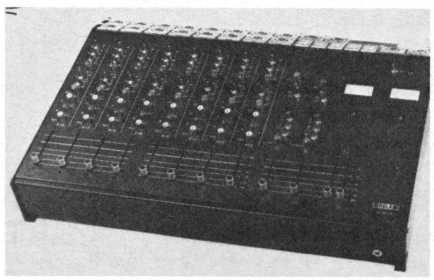

MODEL 45-00 IC AUDIO MIXER FROM SELA

The Sela 45-00 is a small portable professional Sound Mixer. The Mixer is available with 4, 8, or 12 input channels and 2 output groups.

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The superior specifications and features of the 45-00 makes it an excellent choice for all film, video and broadcast applications. Made in Sweden. Current price is $4500.00

•

NEW BATTERY PACKS FOR PORTABLE VIDEO CAMERAS

"On-Board™" Frezzi™ Battery Packs, which give cameramen and camerawomen completely free movement with portable video cameras, were the focus of interest at the FREZZOLINI ELECTRONICS INC. booth (#1608) at N.A.B./Las Vegas.

The new, smaller-profile pared-down shape of these quick-change units, especially Model FBP-13-4B with "customized-design" Frezzi™ Mounting Bracket for RCA TK-76 cameras, were well-received.

Frezzi™ Mounting Brackets of strong, solid, lightweight, metal construction, mount, *where required,* on backs of portable video cameras without need for external or internal camera alterations to attach and use "On-Board™ Frezzi Battery Packs. Brackets are specially designed for the particular portable video camera. Packs available for Hitachi FP-40, Ikegami HL-79A, HL-77, JVC/KY, Philips LDK, RCA TK-76 A or B/C, Sony BVP and other portable video cameras.

Also on display at N.A.B. were the new Frezzi "Stick™" shape Battery Packs for portable video recorders, "Frezzi-Belts™", hand-carried Model 800NC bat-

Continued on Page 722

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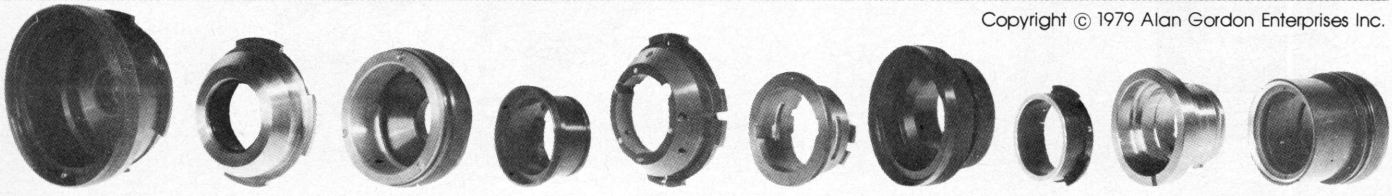

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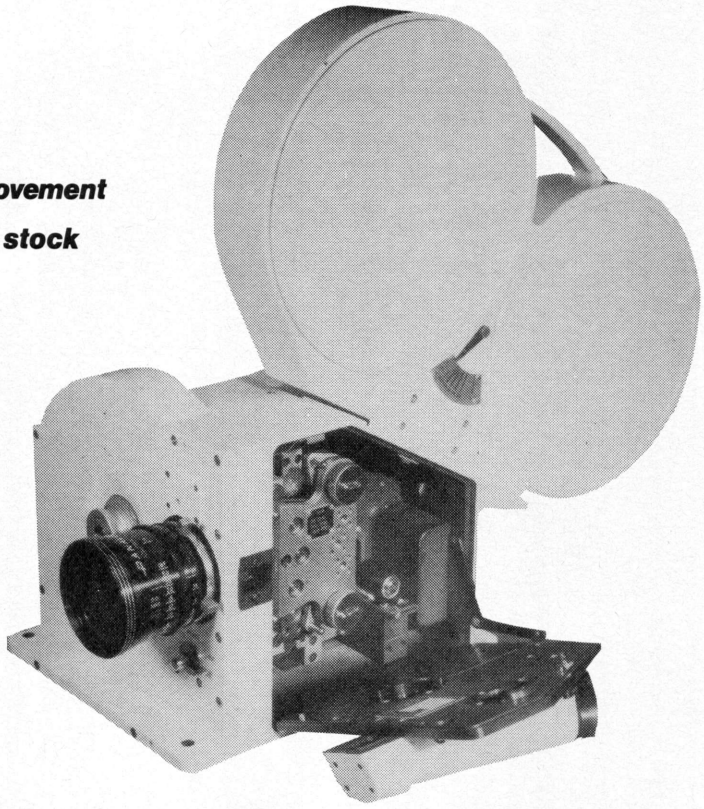

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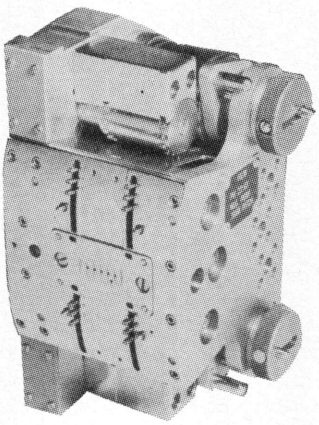

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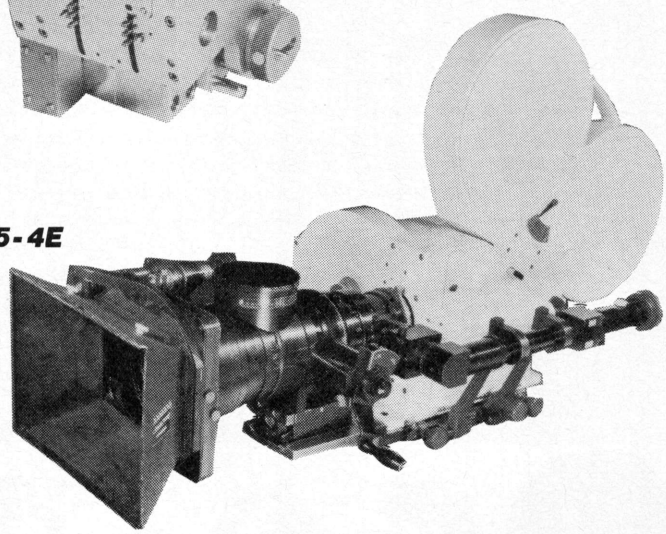

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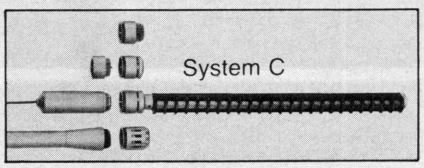

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THE BOOKSHELF

By GEORGE L. GEORGE

ASPECTS OF CINEMA

The latest addition to an invaluable reference set, THE NEW YORK TIMES FILM REVIEWS 1977-1978 reprints in full all movie critiques published in the influential daily during those years. It is an impressive collection that presents an informed perspective on film production and provides a unique record of American and foreign cinematic achievement (Arno Press $70).

Some 300 American movies distinguished by a somber and cynical mood, morose anti-heroes and low-key photography are surveyed in FILM NOIR, a well-researched and deftly analytical work edited by Alain Silver and Elizabeth Ward. A first reference work dealing with this particular style, it carries full production data and plot synopses (Overlook/Viking $25).

A compilation of most popular films of the last 50 years assembled by Paul Michael, THE GREAT AMERICAN MOVIE BOOK reprises over 1000 features with credit lists, Oscar awards, and excellent illustrations (Prentice-Hall $24.95/9.95).

In THE GOLDEN TURKEY AWARDS, Harry and Michael Medved heave well-deserved brickbats at some of the worst films in Hollywood history, bullseying their perceptively-selected targets with sharp wit and critical savvy (Putnam/Perigee $6.95).

Film scholar Kevin Brownlow's illustrated history of the silent film, HOLLYWOOD: THE PIONEERS is a notably informative and attractively presented picture of an era, its outstanding films, leading personalities and technological developments. Illustrations are particularly well-chosen, providing revealing visualizations of a thoroughly readable and engaging text (Knopf $20).

A warm and documented study of the time-honored cradle of British film production, EALING STUDIOS by Charles Barr is an evocative memoir of the team spirit that guided the making of such films as *The Lavender Hill Mob* and *The Ladykillers,* reflecting the mood and concerns of Britain's changing times (Overlook/Viking $17.95).

A new edition of INDIAN FILM by Erik Barnouw and S. Krishnaswamy updates the original 1963 study of an industry

boasting the largest production in the world. Extensively researched, this definitive text follows the course of Indian film from its early imitative phase to its current influential role as a mirror of Indian society (Oxford U. Press $15.95/5.95).

An objective and penetrating assessment of the 1950 political probe by the House Un-American Activities Committee, THE INQUISITION IN HOLLYWOOD by Larry Ceplair and Steven Englund reports factually on the events that stirred the social consciousness of the movie colony and turned it into a significant battlefield in the fight for civil liberties (Doubleday $17.50).

Gay Talese's study of American attitudes toward sex, THY NEIGHBOR'S WIFE, credits sexually explicit films, among other crucial factors, for the profound behavioral changes that affect all strata of society (Doubleday $14.95).

EROTIC COMMUNICATIONS, Prof. George N. Gordon's scholarly survey of the presentation of sex in the mass media, considers its evolution as a side-product of progressive technological culture (Hastings House $18.95/10.50).

★ ★ ★

FILM/TV TECHNOLOGY

Some 90 different camera makes and models are described in David W. Samuelson's expert manual, MOTION PICTURE CAMERA DATA. Numerous line drawings and pertinent operating instructions make it a useful addition to cameramen's accessory case and will assist in the handling of unfamiliar equipment (Focal Press $8.95).

In MUSIC EDITING FOR MOTION PICTURES, Milton Lustig covers the functions and responsibilities of the music editor (film and/or TV) and provides an informative guide for composers and arrangers. Techniques of the craft are surveyed in detail with illustrations, charts and tables supplementing an explicit text (Hastings House $15.95).

Gerald Millerson's THE TECHNIQUE OF TELEVISION PRODUCTION, in an updated 10th edition, offers a wide-ranging survey of the latest equipment, methods and procedures, and covering authoritatively the principles, practices and esthetics of the video medium (Focal Press $29.95).

A comprehensive volume dealing with home electronics' effect on everyday life, FROM TELEVISION TO HOME COMPUTERS, edited by Angus Robertson, probes the constantly expanding field of technological advances and wonders yet to come from VCRs and video discs to in-car entertainment and world-wide cable TV (Sterling $19.95).

Television critic Michael J. Arlen, in THIRTY SECONDS, follows the successive steps in the making of a commercial spot, poking witty but sympathetic fun at clients, advertising and production personnel, and their dedicated labors toward an essentially trivial end-result (Farrar Straus Giroux $9.95).

In TV GUIDE: THE FIRST 25 YEARS, over 100 articles that appeared in the popular weekly have been selected by Jay S. Harris to celebrate memorable personalities and high points of the coming of the television age (NAL/Plume $8.95).

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CELEBRITY ROW

A key figure in film history is aptly appraised by Diane Kaiser Koszarski in THE COMPLETE FILMS OF WILLIAM S. HART, an abundantly illustrated filmography preceded by an informative biographical introduction (Dover $8.95).

Patrick McGilligan's thoughtful study, CAGNEY: THE ACTOR AS AUTEUR is a timely reprint of the 1975 edition, capturing the essence of the versatile performer and his creative contribution to the roles he played (Da Capo $6.95).

In THE LAST HERO, Larry Swindell portrays Gary Cooper in a believable and literate biography as a man vacillating between naiveté and worldliness (Doubleday $12.95). Trader Faulkner's PETER FINCH depicts sensitively a gifted performer whose chaotic career ended abruptly with a heart attack just as it was reaching its peak (Taplinger $12.95).

Susan Strasberg's autobiography BITTERSWEET is told with candor and poignancy as she evokes a life of self-doubt induced by her famous theatrical parents (Putnam $10.95). Her celebrated father is depicted in LEE STRASBERG, Cindy Adams' behind-the-scenes biography of the founder of The Actors Studio through his late-blooming Hollywood acting career (Doubleday $13.95).

A many-faceted Broadway and Hollywood personality, Abe Burrows recalls, in his witty and stylish memoir HONEST, ABE, many glittering anecdotes about himself and his prominent friends, offering a delightful account of his busy and successful career (Little Brown $14.95). ■

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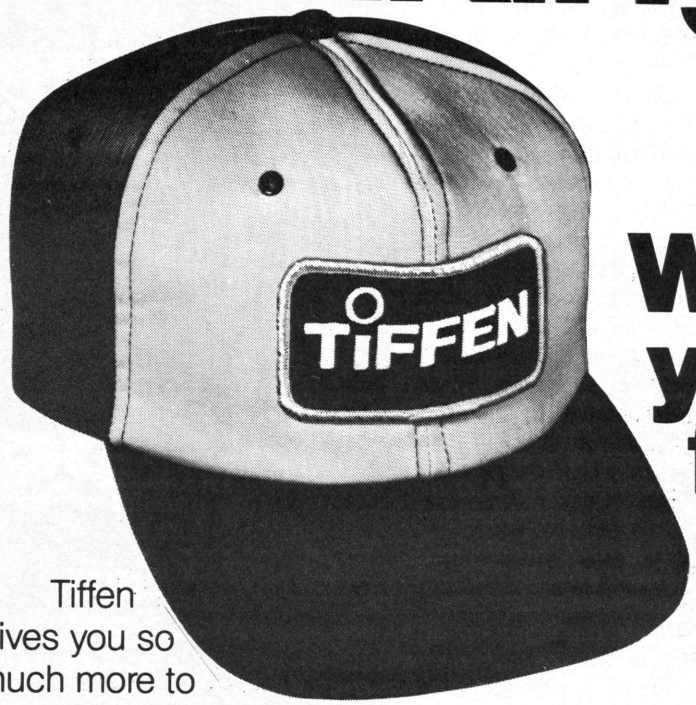

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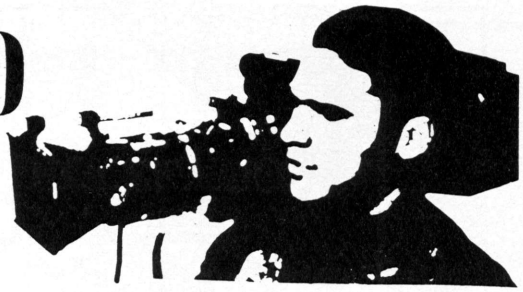


By ANTON WILSON

VIDEO CAMERAS

Recently I mentioned that the video camera inherently offers the cameraman many interesting, creative techniques. Most of these techniques involve the prudent manipulation of the camera controls and adjustments that were actually meant for the video technician and not for the cameraman. While most of these controls (usually more than 200 of them) enable the video technician to calibrate the camera circuits to the manufacturer's precise specifications, the astute cameraman can in many cases alter some of these controls to his creative advantage. One of the most simple of these alterations doesn't even require changing any controls on the camera per se.

There are many instances where the cinematographer may wish to "warm" or "cool" a scene or add a specific color tint to achieve a particular effect. In most cases this would be done by controlling the lighting with gels on interiors or placing filters over the lens. For example, if the cameraman wishes to warm up a scene, he can employ straw gels on the lights or a light yellow/orange filter on the lens. To achieve a full range of subtle effects, the cameraman would have to have dozens of filters or a warehouse of gels. The video camera can accomplish this without filters or gels.

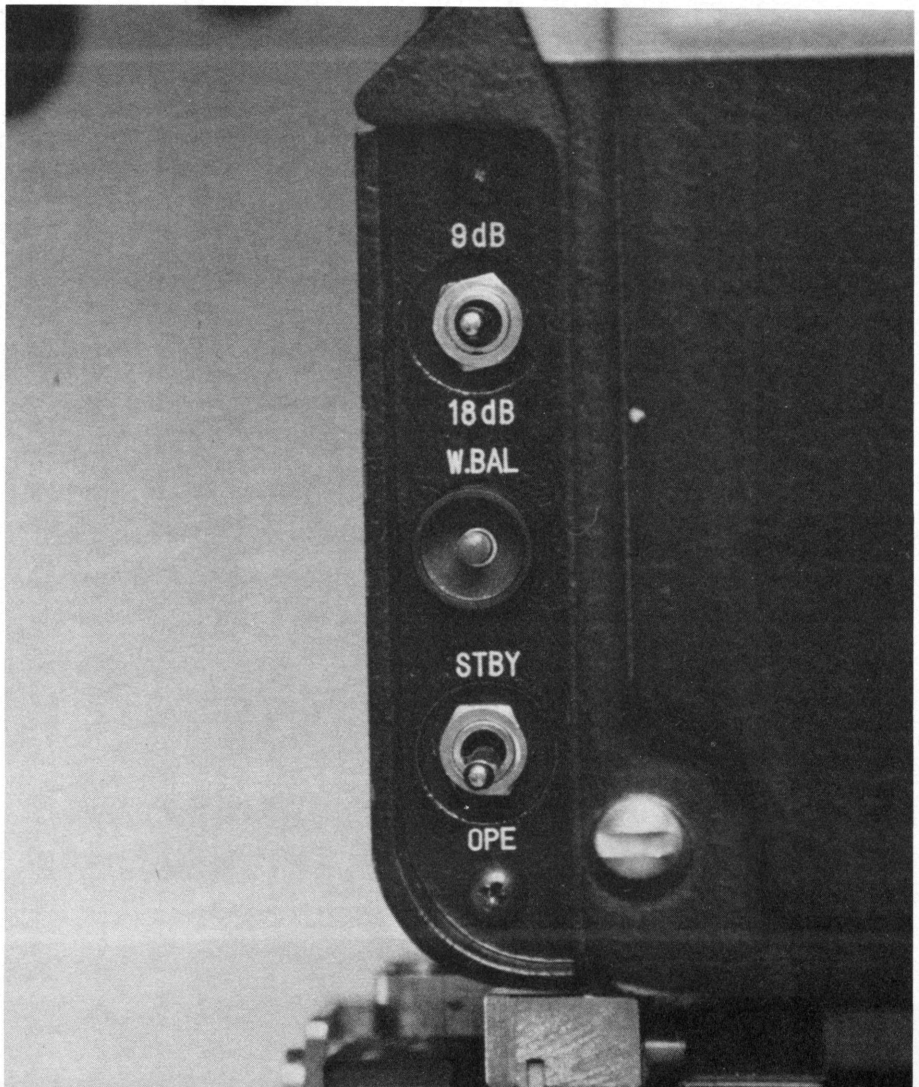
The method involves the auto white balance circuitry of the camera. As you will recall, during auto white balance the camera is pointed at a pure white card that is being illuminated by the same source as the scene to be photographed. The auto white balance button is pressed and the camera automatically equalizes the outputs of the red, blue, and green circuits, which is the definition of pure white: equal amounts of red, blue, and green. Thus, anything white in the scene will be perfectly white and all other colors will naturally fall into place.

An interesting point to ponder, however, is that the camera is taking it upon faith that you are indeed directing its lens at a pure white card when you activate the white balance circuit. This fact is the basis of my tinting technique which, in reality, amounts to lying to the white balance circuits. Taking the former example where a scene is to be warmed up, the video camera is pointed at a card that is not white but tinted in the opposite direction of the desired results. If a straw tint is desired, the camera is pointed at a pale blue card which is the color that is 180° opposite the straw on the color wheel. This should, of course, be under the illumination of the scene to be shot. The white balance button is activated, and presto, the bluish card is now perfectly white on the color monitor. The white balance circuit has boosted the yellow/orange gain in the camera to change the bluish card to white (not realizing it has been tricked). Now when the scene is viewed, it will have a straw tint to it, and the effect can be instantly evaluated on a color monitor.

By carrying a small patch book of various pastel tints and shades, the cameraman has at his fingertips a complete palette of color subtleties. He can instantaneously add to any scene. This technique is superior to gels and filters for several reasons. It is obviously cheaper and easier than carrying filters and gels and automatically balances the changing lighting conditions. For example, if filters were used, the camera would first have to be white balanced on a white card without the filter, and then the filter would be inserted. With the tinted card technique the tint is achieved at the same time the balance circuits compensate for any changes in lighting conditions. Moreover, there is nothing in the optical path to impair image quality.

In the future we will look at other techniques that the video cameraman can use to augment creativity. ■

FIGURE 1—This simple, unassuming white balance button found on virtually all ENG/EFP video cameras can do more than just create true whites. The asture cameraman can use this button to create a wide variety of color tint effects. (See text)



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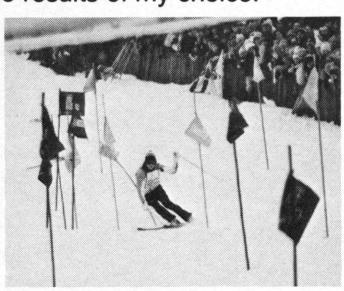
"Naturally I looked for the most lightweight, quick-change cassette-load 16mm camera available," says Souter. "GSMO answered my needs in every way, and I was very pleased with the results of my choice.



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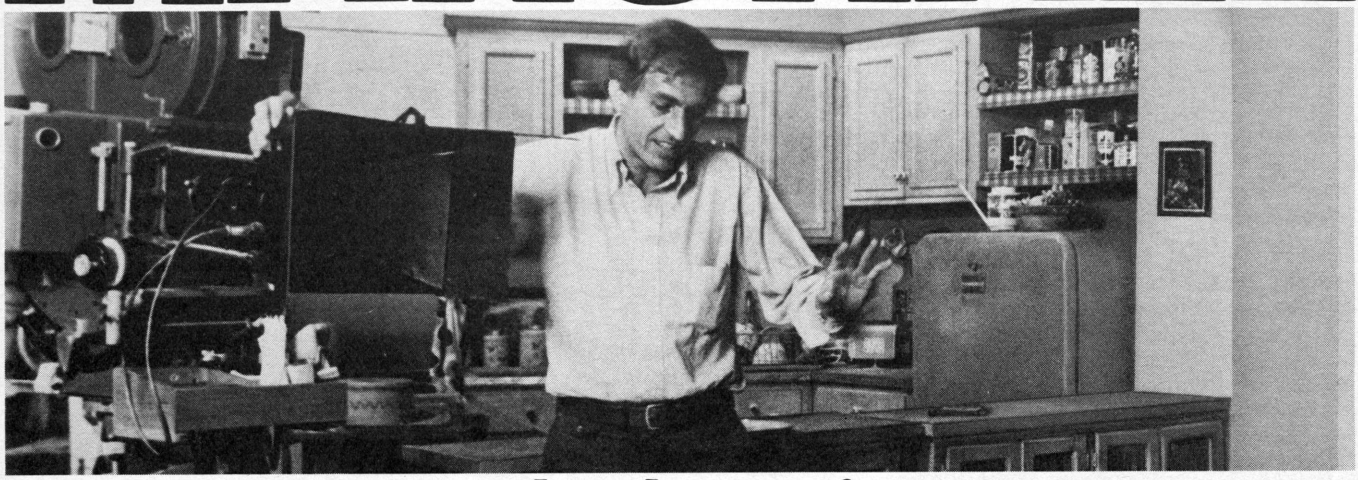

"Film is kind to performers."

Few stars on television shine as brightly as those of Garry Marshall, producer of Mork and Mindy, Laverne and Shirley, Happy Days, and Angie. Garry credits the stars themselves, the stimulation of live audiences, and a technique of working with not one, but three cameras recording all the comedy subtleties on film at the same time.

"Funny is funny. On television, in a nightclub, in the theater, movies, no matter where, funny is funny. And the key is the audience. You're funniest when you use the audience.

"I use the audience as a barometer. I listen to 300 people, and I can *hear* whether they laugh or don't laugh; so I don't need subjective opinions about what's funny.

"The three-camera technique gives me the best chance to be funny, because I always have three cameras looking at *everything.* I don't have to pick the very best shot until later in the quietness of the editing room. Then I can listen to the audience, see where they laughed, and pick the funniest shot. For me it works better than picking the shots electronically as you shoot.

"The three-camera technique involves lots of rehearsal. We're often rewriting up to the very last moment. I have even rewritten lines in front of the audience. I welcome contributions from anybody in my shows, because comedy can come from any place. Many of my cameramen have given me funny lines. Gate guards have contributed. The more creative the atmosphere, the better.

"I think film is kind to performers. It's *much* kinder to women; it makes women look prettier. This may be due partly to the subtler lighting and partly the nature of film. At any rate, my gang is pleased with how the film camera treats them.

"About 86 percent of prime-time television originates on film. The *look* of film may have something to do with this.

"I don't use a laugh track but even using a live audience can be bad. A number of my shows have featured cult heros; so when a Fonzie or a Mork makes an entrance, the audience stands up and cheers. That distracts the viewing audience from the story, so we take that out.

"Part of the appeal of series television is *comfort.* It makes people comfortable to see the same familiar faces each week, doing different kinds of things, but remaining in character. It's like having friends. If you make your series a best friend, you can put it in that wood frame, and it will last for seven years."

If you would like to receive our publication for filmmakers, Kodak Professional Forum, write Eastman Kodak Company, Dept. 640, 343 State Street, Rochester, NY 14650.

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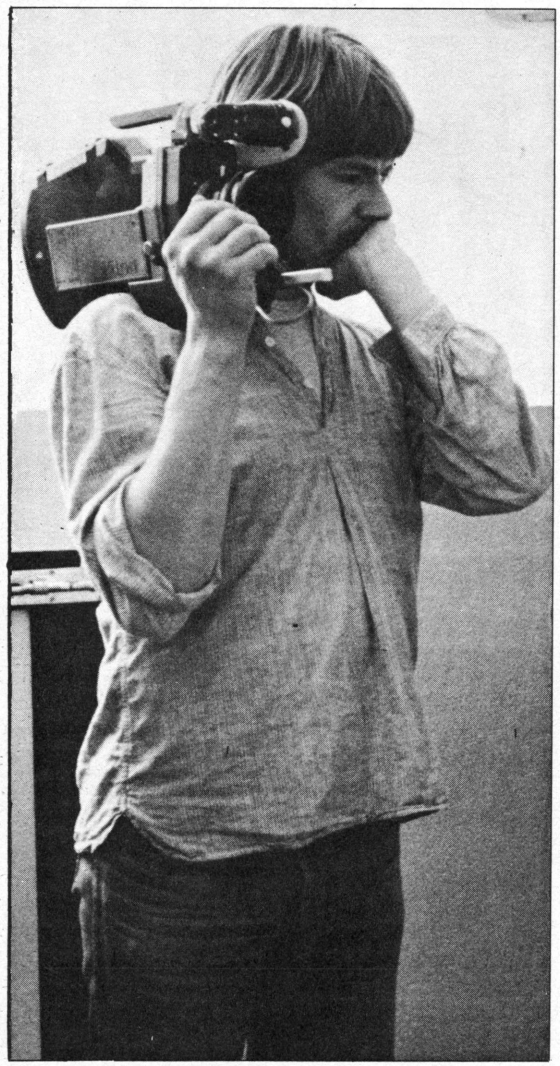
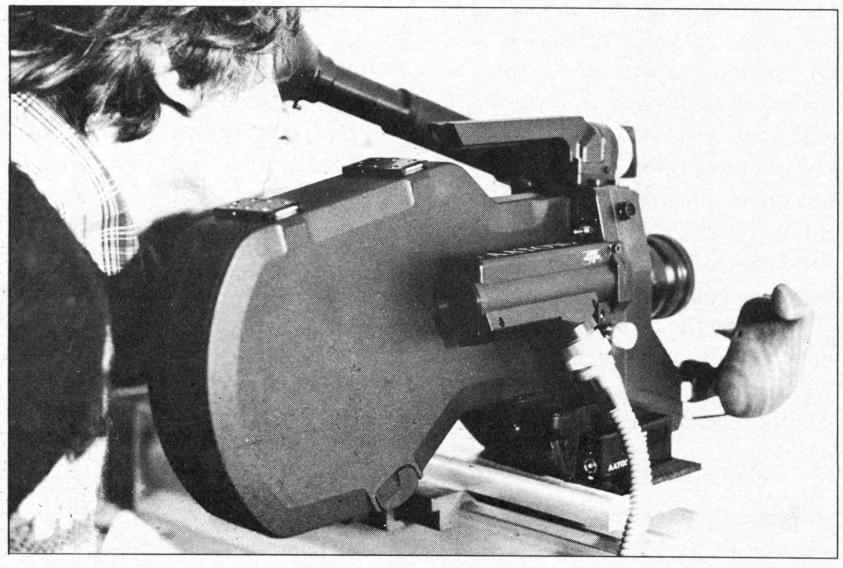
America's Storyteller.



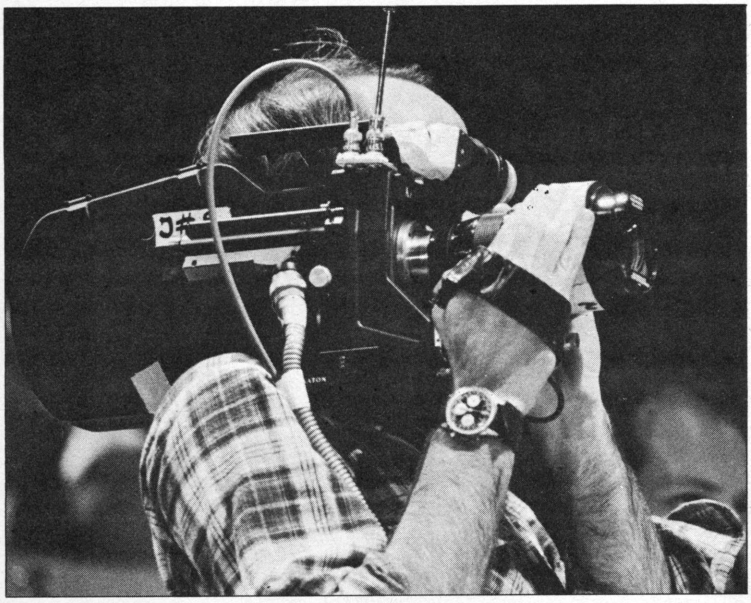
AATON

With its ergonomic design, optimum viewfinder positioning, and adjustable front handgrip, the Aaton 7 LTR 16 mm camera is a reference for handholding comfort. It is light (5 1/2 kilos) and the weight is evenly distributed.



Equipped with eyepiece extender and video tap, it is also perfectly at home on a tripod, making it an excellent studio instrument. Add to this a noise level well below 26 dB on the average, and you can see why discerning cameramen *and* directors choose Aaton.

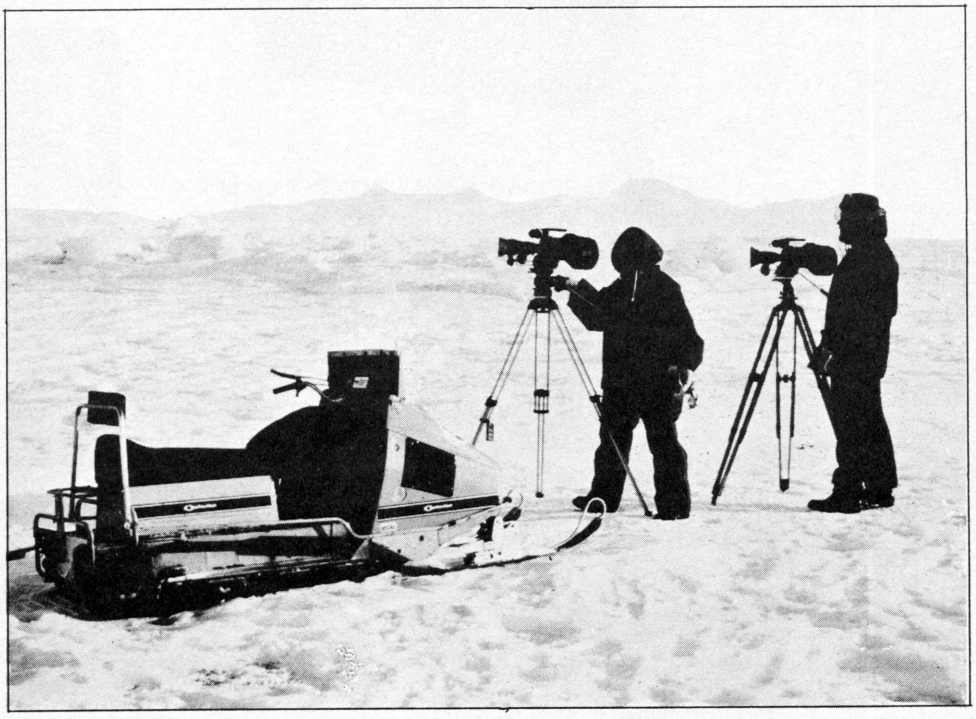
Image steadiness better than 1/2000th is ensured with patented "posi-claw" film drive system : the Aaton is thus a clear choice for blow-ups to 35 mm, especially from Super 16.



Kenneth Thorén

The usual accessories on the Aaton 7 LTR are *un*usual : instrumentation photometer with linear display to ± 2 stops; revolutionary clear time marking system; minuscule video camera niched alongside the film magazine, leaving total mobility to the viewfinder and eyepiece.

The internal design of the Aaton LTR is the key to its sturdiness : the critical mechanical and optical alignments are in no way affected by rough and tumble on the outer housings. The Aaton stands up to the wear of hard use.



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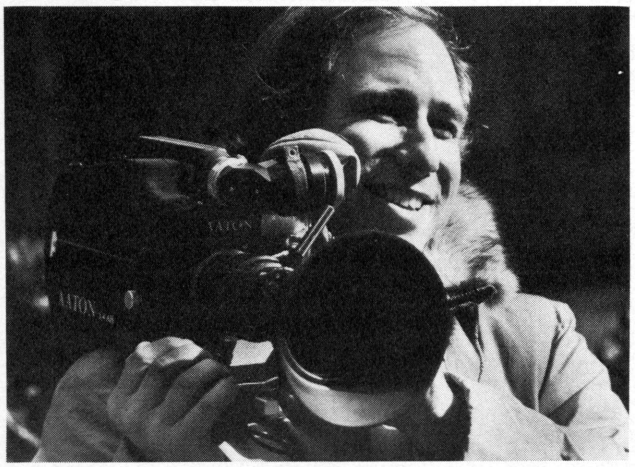
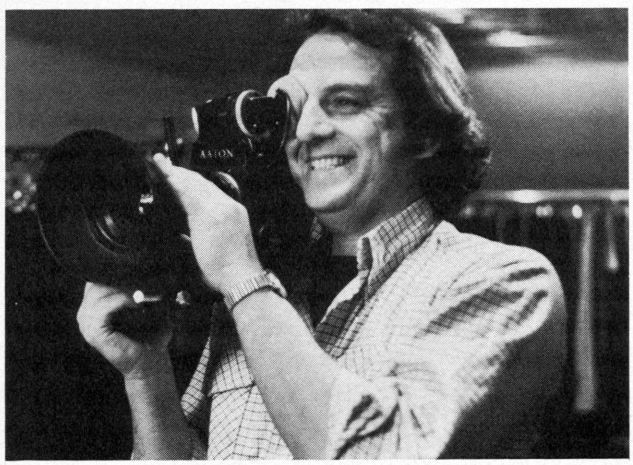


Dave Grubin on-location for "The World of David Rockefeller," the 90-minute documentary he produced for WNET's "Bill Moyers' Journal."

"The design of the Aäton LTR 16mm isn't just beautiful...it's thoughtful, too. They must have spent years analyzing the features active cameramen need. It's amazingly lightweight with a low silhouette and perfect balance, so it nestles softly and naturally on my shoulder. And it stays comfortable all day. I chose Aäton because it's as professional as you can get. And that's why I go to Zellan Enterprises for sales and service."

Greg Cooke filming another "60 Minutes" segment with his distinctive "shoot-from-the-hip style" of cinematography.

"60 Minutes is gutsy photojournalism at its rugged best, and the Aäton is making it even more exciting. The whisper quiet mechanism lets me film interviews unobtrusively in intimate settings. Outside, I can shoot comfortably holding the Aäton out of sight by my hip or balanced just by the carrying handle. And its engineering is as reliable as it is advanced. I brought the Aäton along as my sole camera to a shoot in the Saudi Arabian desert. It was like being in a sandblasting machine, but the camera held up perfectly."



Chuck Levey shooting a segment of CBS' "30 Minutes." Other assignments from the network include "60 Minutes" and CBS Reports.

"The Aäton's fiber optics viewing system is remarkable–bigger and brighter than any I've ever used. Now I can take advantage of the superspeed lenses and 7247 stock to film in the dimmest locations and still get critically sharp focus. Why Zellan Enterprises? Because Aäton is the only camera they distribute and they have top service people in New York and Los Angeles. And Les Zellan's got an exclusive selection of custom designed accessories no one else carries."

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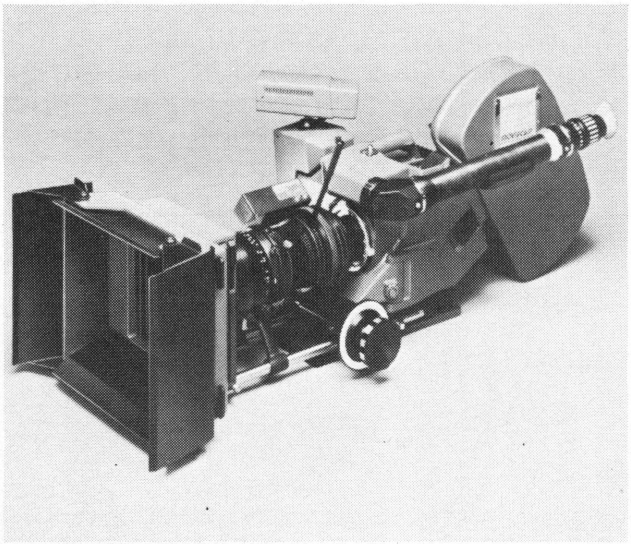

Moviecam is a 35mm system designed from the ground up as a system. Each component is a model of state-of-the-art design, right up to and including, a micro-processor.

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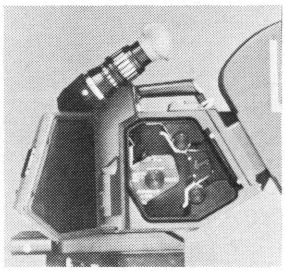


Complete New Movement Design

The compensating link-type movement has dual pin registration and double fork pull down claws for dependable, accurate, long service. This innovative design lets you thread the camera 10 times faster.

So Quiet You Can't Hear It

The sound level is 18dBA. You can put your ear or microphone within inches of the camera when it's running and not hear it.

Moviecam, Made in Austria

Hand-Held Operation

The Moviecam weighs a scant 27 pounds with 400′ load and 50mm prime lens. It's engineered with a contoured shape to fit your shoulder and distribute the weight evenly and comfortably.

Automatic Slate

We call it the Digiclapper.™ It can print scene and take numbers in the upper left corner of the first hundred frames of each scene perfectly.

Built-In Video Capability

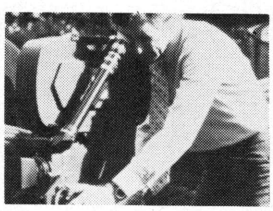
You can feed the image on the ground glass to a TV monitor or VTR while you're filming. So you can see your dailies "instantly." The "Video Assistant" option is a 1½" monitor and control module that can be hand-held.

Built-In Computer

A microprocessor controls the drive motor. It even tells the built-in heating system when to function. Forward, reverse, raw stock footage and frame rates are digitally displayed. Plus a phase shifter that synchs the Moviecam to any TV monitor. The speed control allows the running speed to be changed at programmed rates during the shot. Exposures are automatically compensated.

Lens Compatibility

All the lenses you've carefully collected over the years and wouldn't dream of replacing are compatible with the Moviecam's bayonet BNCR mount.



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You can rotate the viewfinder a full 360° and the image will always be right side up. The "Movielite" feature illuminates the frame outlines.

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"Several years ago we made a trip to New York to interview film laboratories. We at Jayan Films had been having a terrible time with inconsistent and less than acceptable quality work from all of the labs we had been using on both coasts.

"When we walked into TVC... the president of the company called in all the people from the lab to let us know exactly who we would be working with. We were given home phone numbers and told what ever had to be done to get the job done right would be done. The TVC people have never varied from that commitment. We have been dealing with them exclusively ever since and have not regretted it.

"The people at TVC understand how I light and shoot and want the printing to look. The quality control is beyond reproach.

"And here's another story about TVC. Recently, when I was in Florida shooting 16mm film due to a very tight budget, I had to use a 400mm lens that would only open to 5.6. We were able to shoot a half-hour before sunrise and using Chem-Tone... there was no noticeable grain and the picture was clear and sharp.

"Since we are in Atlanta our agency clients often ask about shipping to and from New York. We have never had a problem with this and I emphasize *never! As I knock on wood, I am delighted to say we have never lost a foot of film in transit between Atlanta and New York.*"

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Jimmy Collins,
Director/
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"Moviola's M-77 is my answer to easy editing. I can control the plates separately from the sprocket drive, and don't have to worry about the film flapping in the breeze, as it can do on other flatbeds. When I hit the stop button, the plates stop precisely where I want them to, with no film spillage or loss of tension.

"I especially like the ability to punch in and out of sync quickly and suddenly with a smooth startup; most other flatbeds I've used won't start that gently.

"The advance/retard capability on sound is fantastic. It's perfect for lip syncing, sound effects or for just plain and simple syncing of rushes.

"The master torque motor gives me complete control from stop to ten times sound speed, letting me inch as slowly or quickly as I want; this makes it simple to find a particular spot in the sound track. And the M-77's hollowscope flickerless prism and large screen produce a very bright, easy-to-see picture, with the digital readout for feet/frames and minutes/seconds a real time saver.

"Film handling on the M-77 is very gentle — especially compared to other horizontal editors on the market. In fact, I've run original on the M-77 without a scratch.

"To sum it up, I'd say that the Moviola M-77 lets me concentrate on the film and not on the machine."

Susan Slanhoff has been cutting documentaries, television shows and spots on Moviola M-77 Console Editors for more than six years. She, like other editors, is finding the M-77 the key to fast, accurate 16mm post-production.

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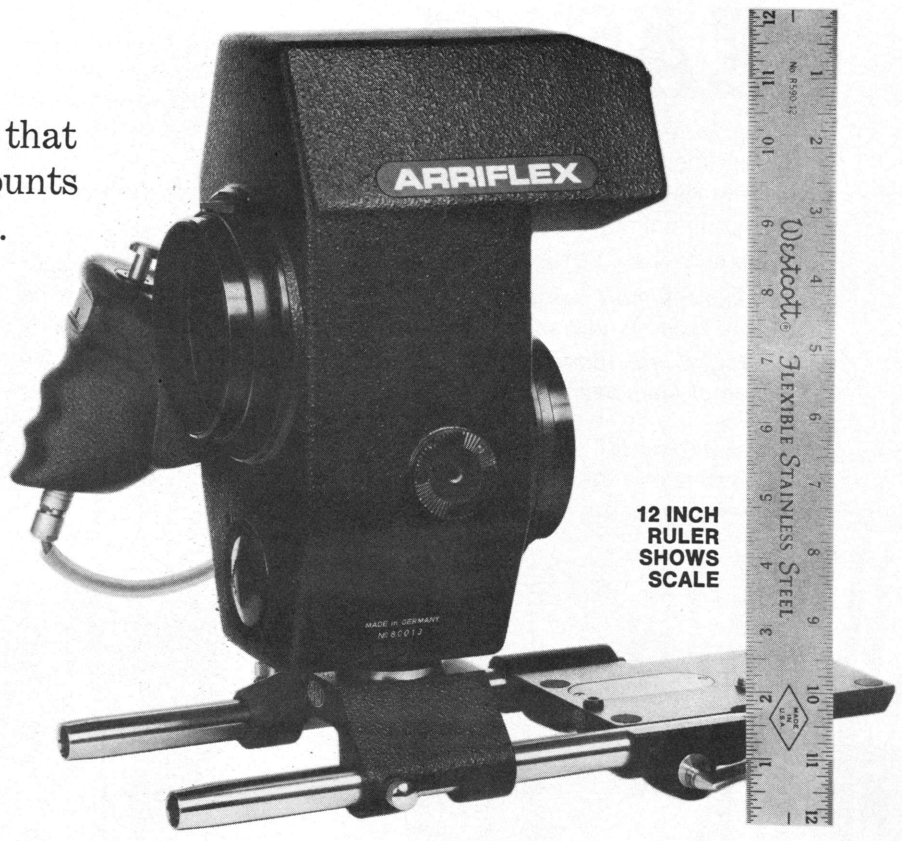

Any tool that can make use of military and aerospace technology benefits greatly. There's the no-expense-spared design development. Exacting reliability standards. And miniaturization.

The Image Stabilizer is 9¼ inches high, weighs 5 pounds and fits into a small box – like your other camera accessories. It doesn't stabilize the camera. It stabilizes the light rays entering the lens. You operate your camera normally – looking through the viewfinder.

No special training needed. It's just another (astounding) accessory.

The Image Stabilizer comes with its own Support Plate and Bracket. You mount your camera on the Plate and position the Stabilizer in front of your lens. Switch on the Stabilizer. Switch on the camera. Shoot.

Get 3 times closer.

Without stabilization in a helicopter, you can't go longer than about the 50mm focal length on a 16mm camera. With the Image Stabilizer, you can get smooth footage at 150mm or more, depending on air turbulence.

The Stabilizer works with any prime lens longer than about 35mm on a 16mm camera – 70mm on a 35mm camera. (With zoom lenses, the shortest focal length varies slightly.) At wider angles, the Stabilizer vignettes. A small price to pay for effectively getting three times closer. And if you need a panoramic shot, that's easy: Pull the helicopter back – or take the Stabilizer off.

How it works:

The entering light rays are reflected off a front-surface mirror mounted on two gimbals powered by a battery-driven gyroscope. The mirror is effectively floating in space, as though on two trapezes – one oriented N-S, the other E-W. The image from this mirror is reflected onto another (fixed) mirror and thence into the camera's lens.

Aerospace technology.

A gyro's directional stability makes it resist off-axis movement – such as panning the camera. If you insist, it tumbles in that direction. British Aerospace, the designers, have turned this tendency to advantage. A precession brake causes the gyro to *lean with* the panning motion, steadily. This is military aerospace technology, ingeniously adapted.

The new Arriflex Image Stabilizer

works with any camera, anywhere.

The British Aerospace Steadyscope uses the same stabilization method. Above: surveillance from a NATO army helicopter.

British Aerospace is a company very much involved with high-precision technology. Military missile systems, orbital satellites...

One of their products is the Steadyscope. It uses the same gyro-stabilization as our Image Stabilizer, whose moving parts are also made by British Aerospace.

How well does it work?

In the November 16, 1978 issue of the British magazine NEW SCIENTIST, there's an article by Guy Parker on stabilized binoculars. Referring to the Steadyscope, Mr. Parker writes:

Anchored in space

"On pressing the uncage button there is an immediate transformation which is both psychological and optical. The impact is of course greater if one is being shaken in a helicopter, but even on land the image appears in an almost uncanny way to anchor itself in space, even if the instrument is deliberately jiggled about."

Detail resolution

"An optical phenomenon now becomes apparent," writes Mr. Parker. "After the initial pleasure at the disappearance of jitter, the eye seems to demand needle-sharp resolution, now that the visibility of detail is determined mainly by the quality of the optical design. *There is no future for a stabilizer which does not give the highest resolution under all conditions of use.*"

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STABILIZER SPECS:

Length (Image Stabilizer alone): 6⅝ ins. Width: 4 11/16 ins. Height 9¼ ins. Weight (Image Stabilizer alone): 5 lbs. Weight on Support Plate with 9½ in. rods and cable-release handle: 7 lbs. 4 oz. Maximum accelerative force: 6g. Warmup time: 15 seconds. Diameter of entry and exit ports: 76mm.

Rear view of Image Stabilizer shows Support Plate with threaded camera mount. Custom brackets are available for various cameras. Stabilizer can be removed from camera in less than two minutes.

No light loss, no image degradation.

There are no lenses, liquids or prisms in the Stabilizer. Light rays pass through optical flats front and rear, and reflect off two front-surface mirrors. The light at the exit port measures the same as the light entering.

Doesn't perform miracles. *Does* work in a car, though.

The Stabilizer is for making shaky shots smoother, *not* for simulating a rock-steady tripod. Thanks to its low mass, you don't have to wrestle with unwieldy g forces inside the moving helicopter. That's useful in a *car*, too, of course. And you can get out of the car with the Stabilizer on your camera, and continue shooting hand-held. (It's quiet enough to shoot sync sound out of doors at typical telephoto distances.)

Proof of low mass space hardware sophistication: a gyroscope powered by one D cell flashlight battery.

To improve a gyroscope's effectiveness, you can increase either its mass or its RPM. For military purposes, British Aerospace had to make it small, light and efficient.

High speed with low mass requires exact dynamic balance, of course. Eccentricity and bearing friction would impair accuracy and soak up power. One measure of the phenomenal precision of this machine: The gyroscope – with its double gimbal and mirror – will run about four hours on a 1.5 volt D cell!

Low mass saves money.

A low mass device is likely to be compact. With this one, you can rent a 5 place helicopter at $300 an hour, and get steady shots *from inside*. No need to hang out of the open door, where the wind buffets the camera. And no need, either, for a 7 place helicopter at $400 an hour, or more.

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William F. White has been supplying film equipment to feature film, commercial, and television production companies for over 15 years. We have provided equipment to almost all the major American film companies and to over 60 feature films including The Black Stallion, Equus, Lost and Found, Highpoint, Silent Partner, Bear Island, The Changeling and Tribute.

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Hit Men!

ON LOCATION WITH "SOMEWHERE IN TIME"

Editor travels to a magical island where time has stood still and a film is being made about going back in time to find a true love

By HERB A. LIGHTMAN

The huge 747 lands at Detroit airport where, after disembarking, I am picked up by a Universal Pictures van and transported to the far end of the airport where there is the tiny terminal of a private air service. Parked on the tarmac is one of those toy four-seater airplanes of the type that amateur Sunday pilots use to take their friends up for joyrides. The prospect of transfering from the giant 747 to this miniature puddle-jumper staggers me for the moment, but having flown with Alaskan bush pilots, I'm prepared for anything. The pilot tells me that we will depart as soon as his other passenger arrives.

I am en route to Mackinac (pronounced Mackin*aw*) Island which, situated at the very northernmost tip of the mitten that is Michigan's Lower Peninsula, floats languidly in the Straits of Mackinac, a narrow channel connecting two of the largest Great Lakes: Lake Michigan and Lake Huron.

As a small child living in Michigan, I had often heard of (but never visited) Mackinac Island. It was (and is) a famous summer resort and friends returning from vacations there had described it to me as a magic place where time had somehow managed to stand still. Quite appropriate, since my current reason for going there is to visit the location where Universal is filming SOMEWHERE IN TIME, a romantic fantasy in which two lovers from different eras manage to go back in time to find each other. I have been invited to observe the shooting by Director Jeannot Szwarc (of JAWS II fame) and Director of Photography Isidore Mankofsky, ASC (of THE MUPPETS MOVIE fame) and I'm very much looking forward to a reunion with these worthies.

But meanwhile there is a more immediate reunion in store for me. The "other passenger" the pilot mentioned drives up and it turns out to be an old friend, Verna Fields. This lady, in case there is anyone in our industry who doesn't know, is the Academy Award-winning Editor of JAWS. Her other editing credits include DAISY MILLER, PAPER MOON, WHAT'S UP DOC, SUGARLAND EXPRESS and AMERICAN GRAFFITI. She has always been a champion of younger directors on their way up (such as Peter Bogdanovich, George Lucas and Steven Spielberg) and for the past few years she has swapped her cutting room for an executive suite as a Vice President of MCA/Universal. She tells me that she is the "Exec" on SOMEWHERE IN TIME and I am delighted that I shall be having the pleasure of her company on the way up to the location.

The tiny aircraft is loaded with luggage and supplies for the film unit, with only just enough space left for the three of us to shoehorn ourselves into the seats. It is already late afternoon when we take off and by the time we sight Mackinac Island it is well into the "magic hour". There are no lights on the short landing strip, nor are there any in the one small frame building that serves as an air terminal. On the ground there is nary a living soul to be seen. The pilot unloads our luggage, bids us farewell and takes off in what is now pitch darkness.

Pampering the cranky pay telephone at the airport, Verna Fields finally gets a call through to the production office and we are informed that there is a taxi on the way to the airport to collect us. About forty-five minutes later we hear the clip-clop of hooves through the woods and the "taxi", which turns out to be a large horsedrawn carriage with a lantern hanging on it, pulls up alongside us.

We decide, before checking in at our assigned quarters, to go directly to the location where the company is doing some night shooting the island's famous Grand Hotel.

Rounding a corner, we come upon it in all its glowing glory, and the thought strikes me that the name "Grand" is a colossal understatement. I cannot begin to convey in my own words the impact of this fabulous hostelry, but perhaps the following facts, gleaned from notes supplied by the Unit Publicist, will serve to describe the Grand Hotel:

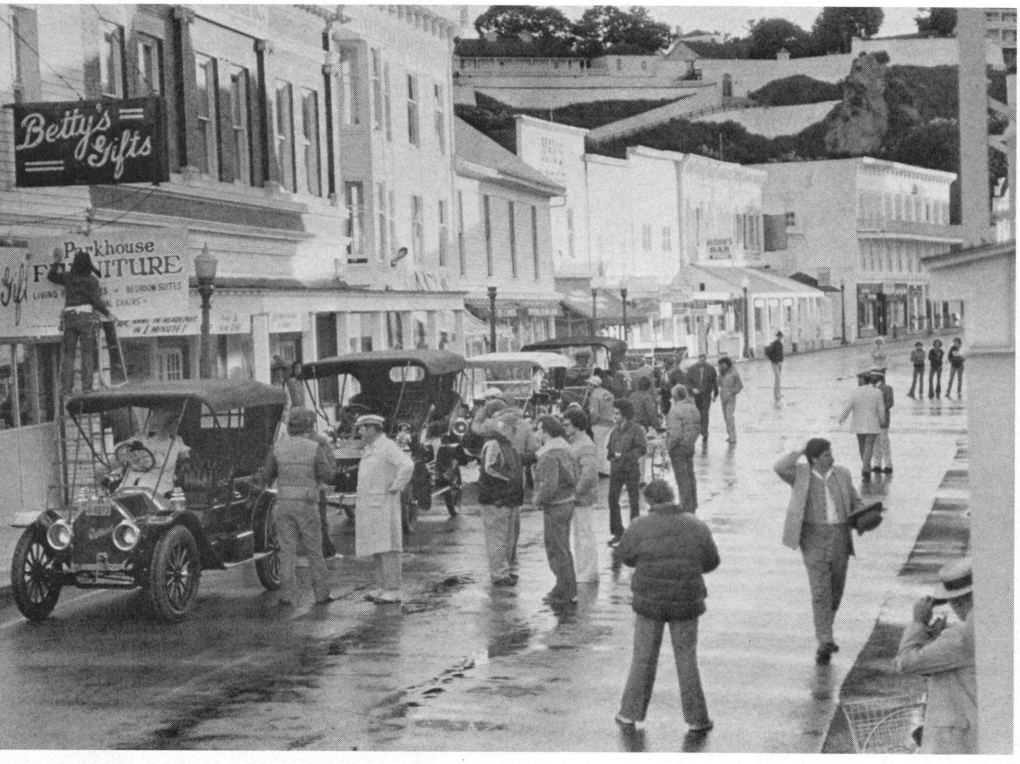
The Grand Hotel on Mackinac Island, Michigan, is the largest summer hotel in the world.

It was built in 1887 of Michigan white pine, is located high on a bluff of 500 rolling acres of greenery that adjoin the 1,600-acre Mackinac Island State Park.

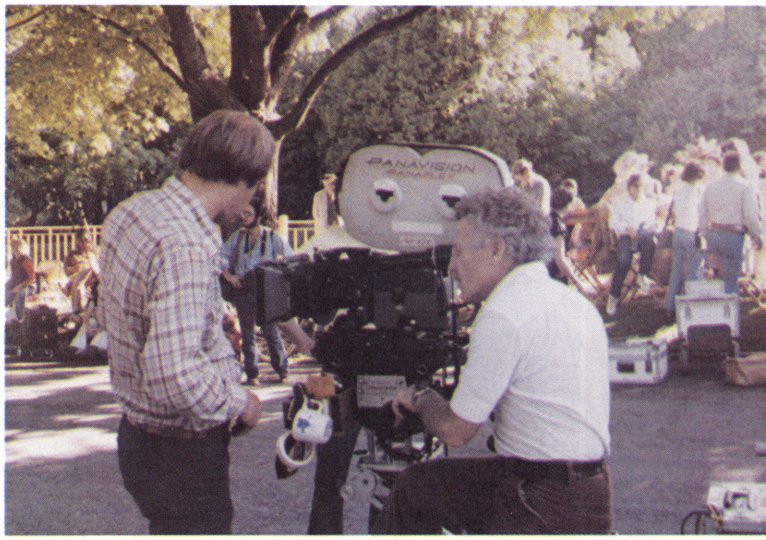
The Grand was expanded in 1897 and again in 1912 when a west wing was added. Several years later, the entire property was remodeled and enlarged again. Since 1925, millions of

Continued on Page 696

Preparing to shoot a scene for the Rastar/Universal production of SOMEWHERE IN TIME on the main street of Mackinac Island in upper Michigan. Since all motorized vehicles have long been banned from this famous resort island, the 1912-vintage "horseless carriages" seen here are strictly props for the filming and were permitted on the island only after much negotiation.



(LEFT) The elegant Grand Hotel on Mackinac Island, Michigan was the "third star" of SOMEWHERE IN TIME. (RIGHT) Almost all of the architecture on the island is of the Victorian period, framed by purple lilac trees. (BELOW LEFT) A horsedrawn "taxi", shown outside the complex that houses both the studio facilities and the Inn at Mackinac. (RIGHT) Director of Photography Isidore Mankofsky, ASC, lines up a shot.



(LEFT) Christopher Reeve prepares to do a scene in front of the Grand Hotel. (RIGHT) Academy Award-winning film Editor (JAWS), Verna Fields, now a Vice President at MCA/Universal, was the "Executive" on the production and traveled to the location with the author. (BELOW LEFT) Part of the 800-foot veranda of the Grand Hotel served as a set. (RIGHT) Limbo set built in the studio was used for the film's final sequence.

BEHIND THE SCENES OF "SOMEWHERE IN TIME"

The quest for a special *ambiance* led this film company to an island where time stands still, and a magnificent hostelry from another era

A magnificent old hotel was essential background for much of the action in SOMEWHERE IN TIME. Although Richard Matheson's book, *Bid Time Return,* had been set at the Del Coronado in San Diego, progress had taken its toll on that opulent Victorian structure and its once idyllic surroundings. The vistas that the Prince of Wales had glimpsed at the turn of the century were now obliterated by condominiums and mazes of television antennae.

Producer Stephen Deutsch sought a spot whose magic would show up on screen and in the spirits of his crew, who would be giving up two months of their life on location. Director Jeannot Szwarc demanded a place that would live up to his incurable French sense of romanticism. Christopher Reeve wanted to forget about SUPERMAN for a while and get on with the business of his new character, playwright Richard Collier, wherever the place may be.

When Reeve came into the picture early in 1979, he remembered a wonderful old hotel not far from Boothbay, Maine, where he had scored his first job in summer stock eleven years ago. Several other stately hostelries were high on the list of candidates. Before settling on any one absolutely, Deutsch and Szwarc decided to check out the Grand Hotel on Mackinac Island, whose description had intrigued them from the start.

Even in February, when the Straits of Mackinac, the five-mile channel between Lake Michigan and Lake Huron, were frozen solid, save the paths eked out by mile-long barges carrying iron along the St. Lawrence Seaway, the two men from Hollywood saw unbelievable visual possibilities in the 92-year-old Grand Hotel and the beautiful little island onto which it had been built like a jewel in a precious setting.

They could not have imagined the springtime that was to welcome them back to Mackinac Island on May 23, after three days in Chicago, to begin production of SOMEWHERE IN TIME.

Mackinac Island has an eventful history untapped in the annals of moviemaking. *Voyageurs* brought home to France stories about this tiny plot of land, three miles long and two miles wide, which the Indians had named "great turtle." Missionaries like Father Marquette, who went on to explore the Mississippi Valley, began to settle the island in 1669, and Mackinac prospered as a central exchange for all cultures coexisting in the New World.

Fort Mackinac was built by colonists in 1780 at the stormy end of the Revolution. The British seized this formidable stone structure during the War of 1812 and proceeded to construct their own Fort George at the highest point on the island. Americans rechristened the site Fort Holmes after the hero of the battle in which they tried to win it back from the British two years later. The battlefield is blanketed now in June with buttercups, one of more than 400 varieties of flora on the island; the other half became a golf course in 1899, when the sport was suddenly all the rage.

The fur trade prospered on the island during times of peace. John Jacob Astor set up headquarters for his American Fur Company near the harbor and dispatched boats to all parts of the world with his wares. Mackinac was a busy port whose virtues were being extolled by poets like William Cullen Bryant, who wrote after an 1846 visit, "Its climate during the summer months is delightful; there is no air more pure and elastic . . . . The world has not many islands so beautiful as Mackinaw. . ." (Even then, there was difficulty reconciling the spelling of Mackinac with its pronunciation.)

Tourism and a thriving fishing industry revived the island's economy when the fur traders ran out of pelts and fashion outmoded beaver hats. Mission House, a frame structure built in 1825 as a school for Indians, was transformed into a hotel in 1852, and the trend soon included establishments like the Island House, the Iroquois, Stone Cliffe and the Windermere.

In 1875, Congress set aside almost 80% of the island as our second national

(LEFT) Filming on the streets of the Mackinac Island village for the Raster/Universal production of SOMEWHERE IN TIME invariably attracted a large gallery of fascinated tourists. Here the crew sets up for a dolly shot outside buildings that have been carefully preserved. (RIGHT) A rarity on Mackinac Island is this sportscar, brought in exclusively for the filming. All motorized vehicles have long been banned from the island and multiple permits were required for the company to bring along a few such necessary vehicles.

park, second only to Yellowstone, which had been founded three years earlier. By this time, the lilacs of Mackinac had already achieved quite a well-rooted reputation—66 strains of lavender explode in a fragrant burst of color early each June, including hardy trees from seeds planted by horticulturally inclined adventurers in the 17th century.

Railroad magnate James J. Hill launched a fleet of luxury liners through the Great Lakes to hurry the *haute monde* up for Mackinac's short summer season. An enterprising young mechanic named Henry Ford was brought in from Detroit to install the steam engine on the *Algomah,* the most famous of the ferries that shuttled passengers from the mainland. Today, the Mackinac Bridge spans the five miles between St. Ignace on Michigan's upper peninsula, and Mackinaw City on the south shore.

The Grand Hotel was envisioned by Michigan industrialist Francis B. Stockbridge as the ultimate in resort hotels. Gathering together the three transportation companies that serviced the island into one single-minded partnership, he broke ground in 1886 for the inimitable edifice on pastureland that once fed the cows of Fort Mackinac.

On July 10, 1887, the Grand Hotel opened to a rush of one thousand guests from pockets of affluence all over the Midwest. From Chicago came the Marshall Fields, the Armours, the Swifts and the Potter Palmers. Adolphus Busch and his beer-drinking cohorts came up from St. Louis. Detroit was represented by the Algers, the Newberrys and the Whitneys. Governor Cyrus G. Luce liked his suite at the Grand so well, he decided to stay all summer. Francis B. Stockbridge was elected Senator from Michigan that fall.

Built in an age of over-decoration, the Grand Hotel is remarkable for the timelessness of its clean, Neo-Classical lines. Constructed of clear white pine, the building has been able to survive revamping without structural disruptions to its appearance. Awesome is the 900-foot porch, where sunsets can be seen until ten o'clock on summer nights through Doric columns three stories high, and Northern lights vie for the attention of star-gazers.

Even in 1901, Mackinac Island was regarded as a charming and historic spot, a place where, perhaps, time ought to stand still. In this year, when there were less than 200 cars in all of Michigan, motor vehicles were banned forever from the island in deference to the eternally reliable horse and a different new invention, the bicycle.

With such atmosphere at work all around them, it didn't take much for the filmmakers to conjure up *deja vu* pictures of elegant living in 1912. Getting permission to shoot on the island and adapting its old-fashioned ways to modern moviemaking was another story.

Huge generators are needed by motion picture productions to provide electricity away from the studio, and they are transported in 40-foot semi trailers weighing many tons. A van carrying set decorations, massive Victorian antiques for the 1912 interiors, was so heavy that it broke an axle on the trip from Universal City to St. Ignace, the drop-off point for heavy freight to be barged across to the island. Even a 40-mule team would have trouble hauling the equipment

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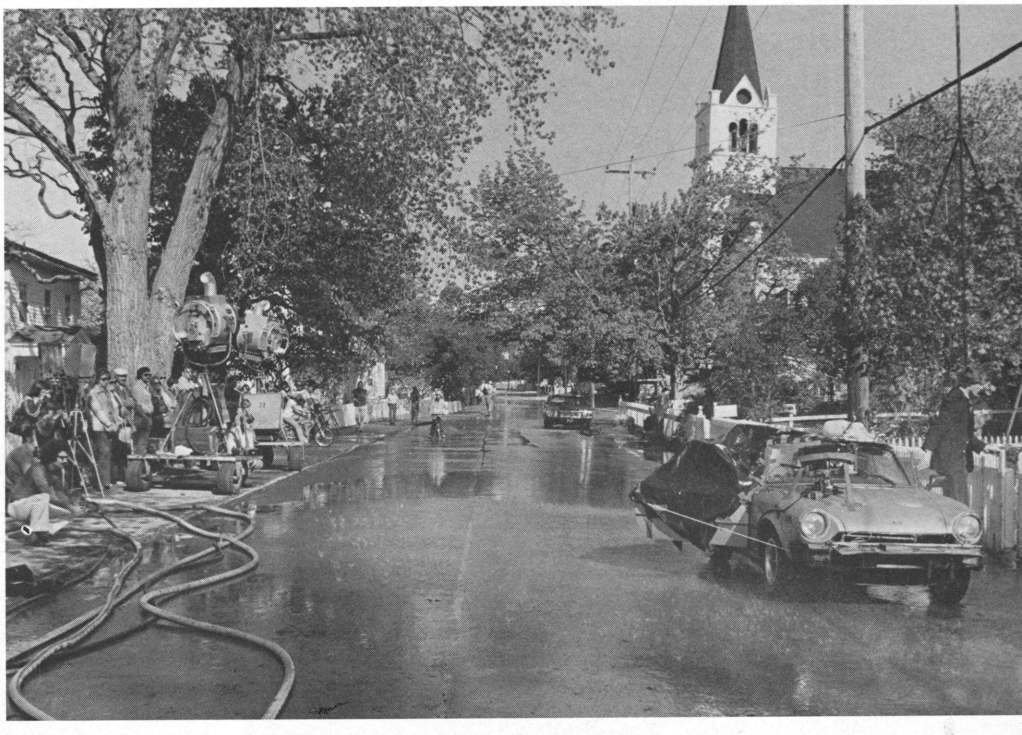

Filming a boom shot against the sweeping facade of the Grand Hotel on Mackinac Island. The stately edifice, almost a century old, is the principal locale of the action and a perfect choice for this particular subject. It has been treated with tender loving care in the film. (BELOW) A fairly elaborate set-up for filming a running shot in the rain on the streets of Mackinac.

FILMING IN THE TIME WARP OF TWO DIFFERENT ERAS

Two separate film stocks, split-diopters, an array of different lenses and altered lighting aid the cinematographer to move from 1912 to 1979

As Director of Photography on SOMEWHERE IN TIME, Isidore Mankofsky, ASC, brings to the film a photographic style that is considerably different from that of another of his recent assignments, THE MUPPET MOVIE (See *American Cinematographer,* July, 1979). In fact, it may be accurately stated that SOMEWHERE IN TIME utilizes *two* different photographic styles—one for sequences portraying contemporary action and another, quite distinct, for sequences of action taking place in 1912.

Mankofsky's other assignments as Director of Photography include: CAPTAINS AND KINGS, ASPEN, THE TESTIMONY OF TWO MEN, GOLDIE AND THE BOXER, ESCAPE and, most recently, THE JAZZ SINGER.

In the interview which follows he describes the special challenges of photographing SOMEWHERE IN TIME and discusses some of the techniques he employed:

QUESTION: The idea of two distinctly different photographic styles in the same feature film is a fascinating one. Would you care to discuss how you put that idea into action for SOMEWHERE IN TIME?

MANKOFSKY: According to the original concept of the film—arrived at through discussions with our Director, Jeannot Szwarc—there was to be a very definite difference in look and texture between the period part of the picture and the contemporary. To begin with, the story takes place in two very distinct time frames; 1912 and 1979, and in order to make the film work dramatically, we had to make sure that, in terms of visual presentation, these two periods would not look the same. The objective was to carry the audience back in time subtly, but with a definite difference in the "look" from one era to the other.

QUESTION: In terms of physical or mechanical techniques, how did you go about achieving that?

MANKOFSKY: To begin with, we did something that I'm sure has been done before, whether accidentally or intentionally—we used two different film stocks for the two different time periods. We used Eastman color negative for the contemporary sequences, because it tends to be a little harder in the shadows and to have a crisper, more solid look to it. It seems to resolve better and to be sharper all the way through. Likewise, we decided to go with Fuji color negative for the period sequences because it seems to be a bit more pastel. It doesn't appear to have quite the resolving power of the Kodak stock or the really black blacks. After making a number of tests using the same subject and the same lighting and going all the way through an interpositive to release print, we proved to our satisfaction that this approach of using two different film stocks could be very effective.

QUESTION: Was the difference in visuals, then, due mainly to the use of the two different film stocks?

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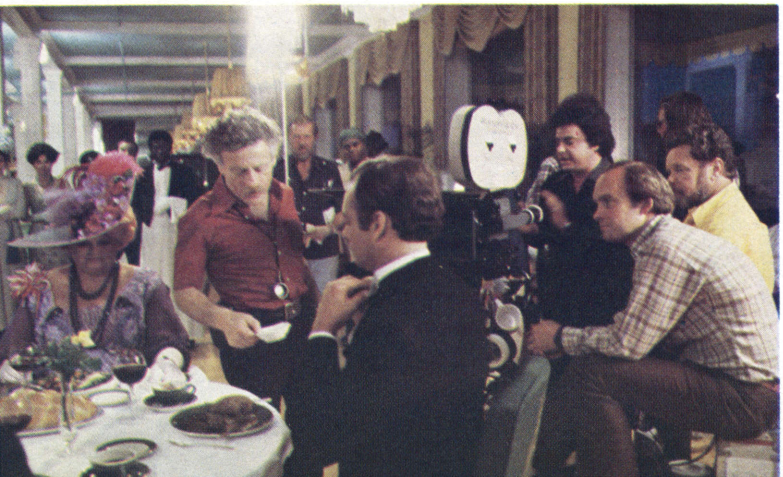
(LEFT) The lobby of the Grand Hotel on Mackinac Island, shown with present-day decor used for filming contemporary sequences. (RIGHT) The lobby re-dressed to simulate how it might have looked in 1912. (BELOW LEFT) Diurctor of Photography Isidore Mankofsky, ASC, prepares to shoot a period scene in the Grand Hotel dining room. (RIGHT) Mankofsky with Jeannot Szwarc, whom he calls "a super director."



(LEFT) With its 800-foot veranda flooded with light, the Grand Hotel glows like a gem at night. (RIGHT) A set from the film representing a museum room in the Grand Hotel, where Christopher Reeve falls in love with a photograph of a young actress taken in 1912. (BELOW LEFT) Readying a boom shot of Reeve's car driving toward the hotel. (RIGHT) The two lovers riding in a horsedrawn surrey—and followed by a "horseless carriage".

(LEFT) and RIGHT) Views of the 250-foot-long Grand Hotel dining room dressed and peopled for the 1912 period. (BELOW LEFT) Having removed all excess furniture from his modern room in the Grand Hotel, Chris Reeve listens to his tape recorder, attempting to will himself backward in time. (RIGHT) In a lyrical, exquisitely lighted love scene, the two consummate the romance that has brought them together through time.

SHIFTING DIRECTORIAL GEARS FROM SHARKS TO NOSTALGIA

The director who scared audiences with his action-adventure, JAWS 2, now turns his talents to an unabashedly romantic theme with equal skill

By JEANNOT SZWARC

My involvement with SOMEWHERE IN TIME actually began when Ray Stark called me while I was doing post-production on JAWS 2 and said he'd like to talk to me. I had a meeting with him and we talked about a project he had in mind which would be a kind of science-fiction extravaganza with an enormous budget.

I really did not want to do a big picture after JAWS 2, and I did not want to do anything that had special effects or tremendous logistical problems. I told him this and he said, "Well, let's do something else. What kind of script are you looking for?" So I told him what I would really like to do.

I'm a great believer in the return of pure romanticism to films. Everybody's so afraid of sentimentality today. We've become so cold, so unemotional. I told him that I wanted to do a romantic story with an element of mystery to it—something like REBECCA or THE GHOST AND MRS. MUIR or PORTRAIT OF JENNY. When Stephen Deutsch, who was there at the time, heard that, he jumped up and said, "We have this book that we've had for a couple of years, but we haven't yet found a director who really understands the material."

The book was Richard Matheson's novel, *Bid Time Return.* I knew Matheson as a writer and as a person. I'd worked with him. So I read the book that night and loved it. I called Ray Stark back and said, "I want to do that next."

Then Stephen Deutsch, the Producer, and Matheson and I developed a script together and called it SOMEWHERE IN TIME. It's a very romantic love story. I think it's a bit of a return to the filmmaking that existed 30 or 40 years ago in terms of story. Nothing like it has been done recently.

I had always had another dream and that was—in addition to doing an intelligent romantic film—to portray people and things maybe not the way they are, but the way they *should* be. I feel that films should elevate people and make them feel that they are human beings and extraordinary and wonderful, instead of diminishing their self-esteem. It's been a long time since I've gone to a movie and gotten a lump in the throat, so I wanted to do one where people would get a lump in the throat.

There is something else that has always bothered me a little bit about Hollywood and that is the totally artificial wall that exists between theatrical films and television films when it comes to talent. Ingmar Bergman does at least one 16mm television film a year with Sven Nykvist as cinematographer. Jean Renoir has done work for television.

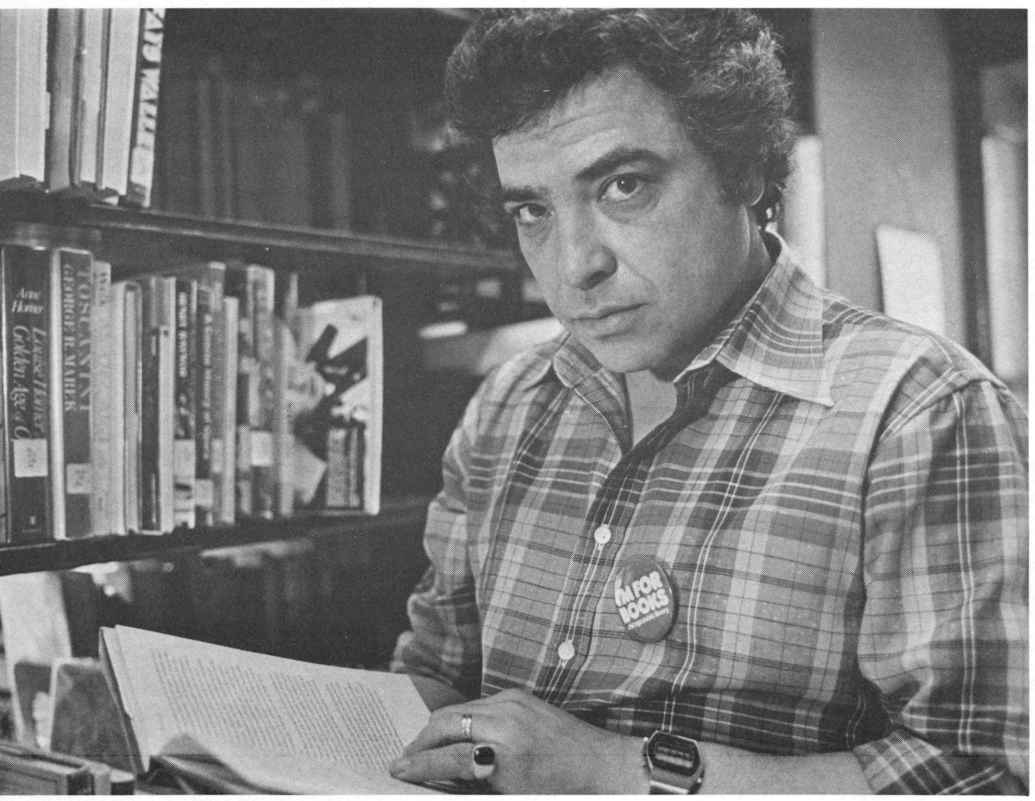
Many American film technicians come from television, but when they get their break in theatrical filming, they all say, "I don't want to do television." I've always wanted to do a film to prove that the wall between the two is a lot of nonsense, that there is an enormous amount of talent available in television that just has to be found.

There is an old Hollywood joke that says that everybody always wants the top ten of everything. I remember that I used to talk about Nestor Almendros four or five years ago and nobody had heard of him; now everybody wants him. Six years ago nobody knew Sven Nykvist; now everyone does. So when we started this picture, I said—and Stephen Deutsch agreed with me—that we should get a group of people together who were madly in love with the project and totally committed to it. They should be people who had the talent and capability, but who, just because of timing or luck, had never really gotten the breaks they deserved.

For example, I had worked with Isidore Mankofsky before on a television series called THE BOLD ONES and we had done a very difficult episode with flashbacks and a lot of visual effects that had never been done before, and I had been very impressed with him and his work. So I called him and said, "Look, I have this script which I think is going to be a cameraman's dream, and the visual concept is going to be very important." We met and he read it and he called me the next morning and said, "I absolutely want to do it."

From the beginning, the other thing I wanted to do was put an end to the "religion of the director". I don't care what some of my colleagues say (maybe it will hurt their egos), but film is a collective art form. So we all agreed, right from the start, that this would have to be a very serious collaborative effort and we spent an enormous amount of time just discussing the visual concept of every

Perhaps it's because he's a Frenchman (*L'amour* and all that), but director Jeannot Szwarc says, "I'm a great believer in the return of pure romanticism to films. Everybody's so afraid of sentimentality today. We've become so cold, so unemotional." In response to those sentiments, SOMEWHERE IN TIME is a heart-warmingly romantic film.



scene.

Izzy and I went over the whole script and I told him from the beginning that I wanted two different, separate looks for the picture—one for the present and one for the past. I ran some films for Izzy and the key people, films like DEATH IN VENICE—and I bought a lot of art books, especially with the work of the French Impressionist painters, like Manet and Monet.

We agreed that for the sequences taking place in the present we would go for a very cold, monochromatic look—long lenses, Eastman stock and no primary colors. For the sequences in the past we would use Fuji stock (which is a little bit softer and less contrasty) and go for wide-angle lenses and diopters and deep focus and a very pastel look.

We followed the concept through in everything—in set dressing, the colors of the walls of the sets, and also in wardrobe. We tried to avoid primary colors everywhere, and particularly in the sequences of the past. Our basic approach to the film was to subconsciously make a visual statement that would move the audience to fall in love with the past—but we didn't want it to be obvious; we didn't want to do a pamphlet. From the beginning we all agreed that we were going to make a love story that would be a classic.

There are things in this picture, besides the technical elements, that are quite unusual. There is very little sexuality, no really hardcore sex scenes at all. There is, I think, one kiss in the whole film. It is a return to a much more classical romantic sensitivity. Izzy has done an incredible job, just as I knew he would. I think this picture is going to make him a very, very hot cameraman—and he deserves it.

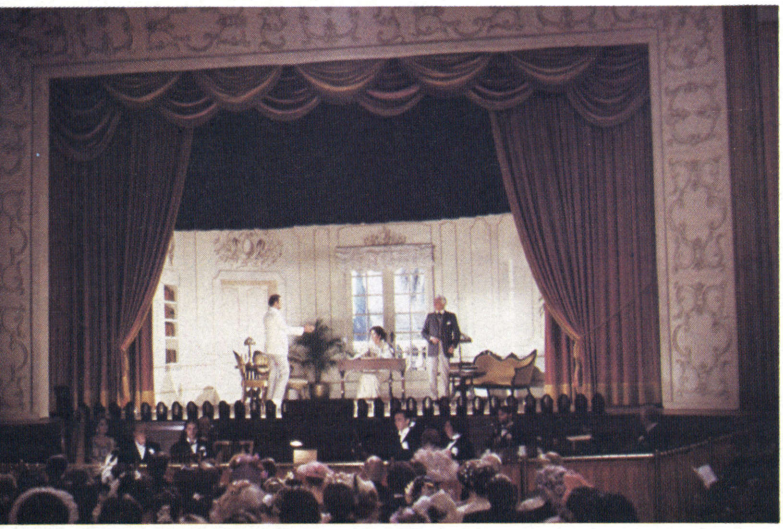
A very important visual element is the location itself, Mackinac Island. They have never allowed motorcars there and the basic island and the Grand Hotel are still very much the way they were 50 or 60 years ago. We took the approach that we would use most of the island the way it was for the past, and then get special permission to bring in some cars and other vehicles and do some dressing in order to change it to the present. An added advantage was the fact that there is a totally professional and modern sound stage which was built by the Moral-Rearmament people and that we could find some exteriors we needed for a college campus.

In terms of extras and some of the labor, we have used local people as much as we could and they have made up for their lack of experience by their enthusiasm. It has been a very, very happy relationship. We are shooting at the Grand Hotel in the middle of the season, when they are usually booked 98% in advance. They really don't need us; they didn't even want the publicity. I think what happened was that the owner of the hotel read the script and really felt that if the picture was going to be as beautiful and successful as we hoped it would be, it would sort of immortalize the Grand Hotel, and that's why we got

Szwarc discusses a scene with the lovely Jane Seymour, who plays the role of an actress (young in 1912) who falls in love with a man from another time frame and seeks to be reunited with him. Szwarc encourages his actors, discussing in great depth their characters as drawn and extracting fully rounded performances from them.

With Director of Photography Isidore Mankofsky, ASC, Szwarc lines up a shot of Christopher Reeve in his sportscar. Of Mankofsky he says, "He has done an incredible job, just as I knew he would. I think this picture is going to make him a very, very hot cameraman—and he deserves it."

Director Jeannot Szwarc (shown LEFT giving direction to Christopher Reeve and Jane Seymour) had wanted to lose the "shark image" he had earned by directing JAWS 2. He also wanted to do an all-out sentimental, romantic film instead of another action feature. SOMEWHERE IN TIME (adapted from the novel, *Bid Time Return* filled the bill exactly. He has directed the script with great skill and delicacy and has created a warm ambience of nostalgia—helped along, of course, by the beauty of Mackinac Island.



permission. They are doing us an enormous favor, allowing us to shoot even though they are in the middle of their season, but I don't think we have interfered with their operation too much.

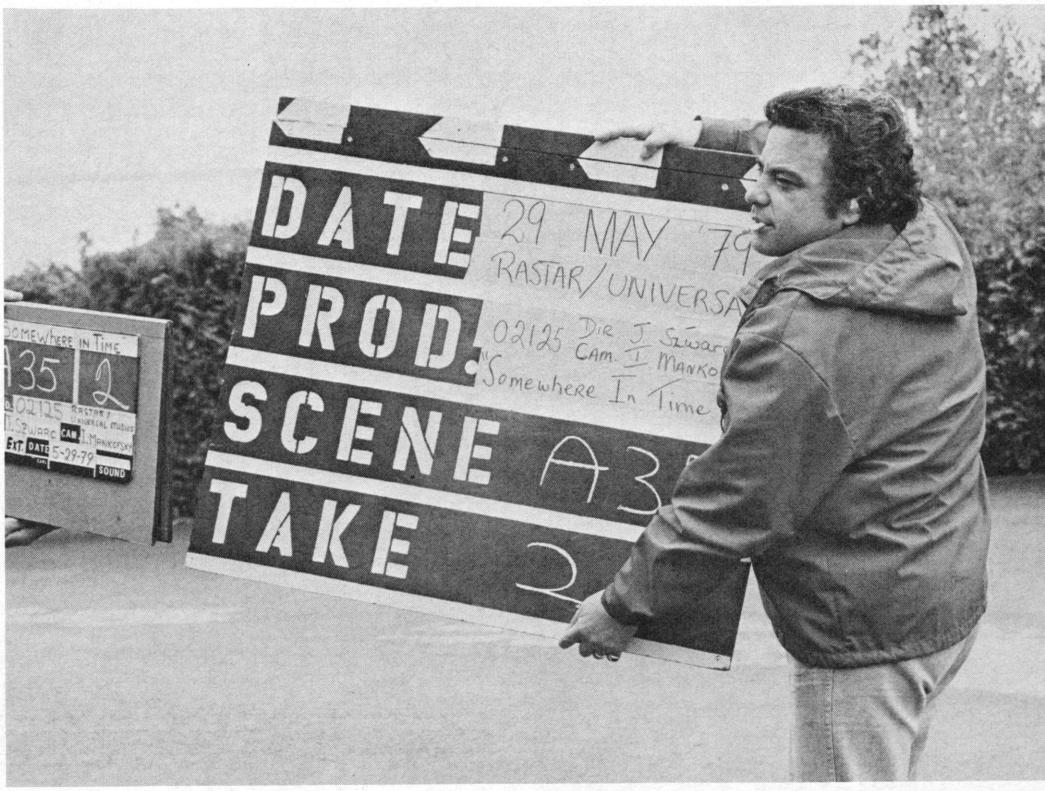
I feel very strongly that in recent years filmmakers and films have been getting more and more away from storytelling and becoming more and more vehicles either for the ego of the director or the ego of the cameraman or the marvelous inventions of technology. What we are trying to do is go back a bit to what films should really be—which is stories told in images. But a perfect film should be a film in which the audience is never aware of the technique, never aware of the camera, and we have tried to stay that way.

I feel that in order to make a great film, the people involved have to have some sense of humility. There are moments when the story is much more important than trying to show the virtuosity of tremendously long lenses. We have tried to give this film an enormous amount of richness but, at the same time, a great deal of simplicity. It is a film that the audience can see from the inside, instead of always being out there just looking through a window. Hopefully, they can become totally involved with the characters and the story.

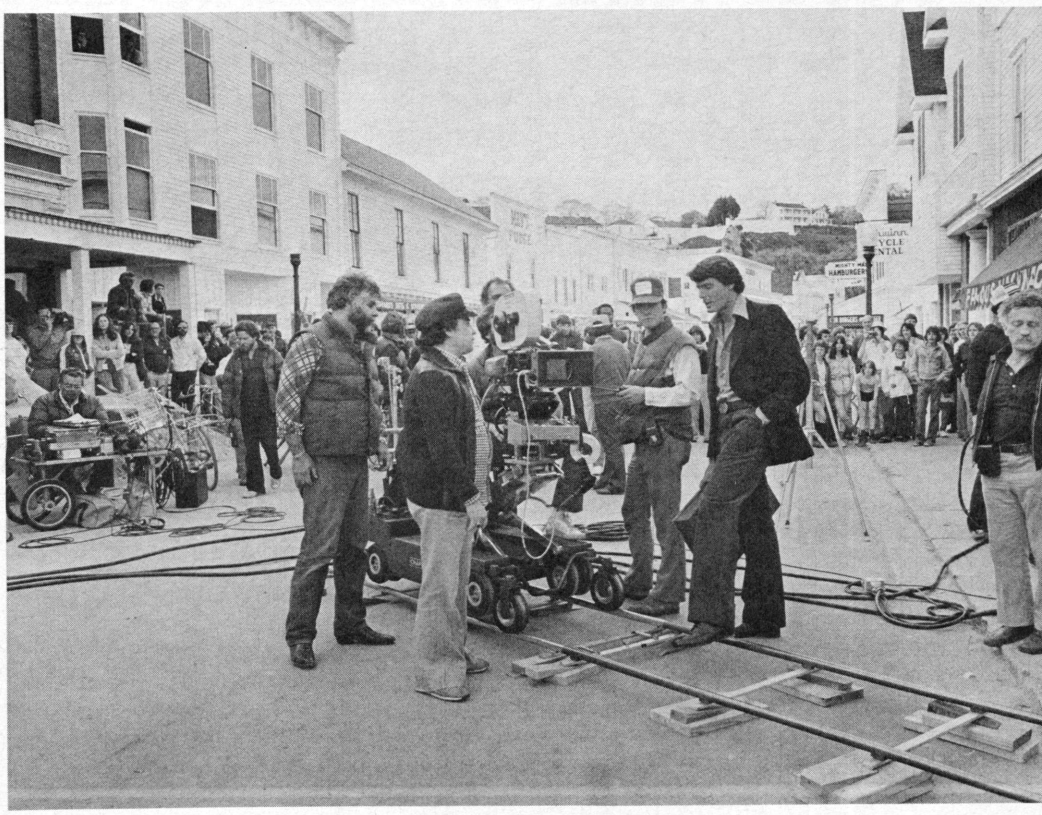
Everybody who has been connected with this picture is somebody who wants to prove something or get away from something. I wanted to get away from the image of being a "shark director" and Chris Reeve wanted to get away from the image of flying around as Superman and prove that he really can act. I think that his is one of the most difficult roles that I've ever seen in a script. He's in every scene and the range of acting is enormous.

Izzy wanted to prove that he is one of the top cameramen in Hollywood and Steve Deutsch wanted to prove that he could produce a film on his own, so all of us were sort of in the same situation. That's why I think it is not only a very happy crew, but in terms of artistry and craft, it is an extraordinarily committed crew. Even people from the press have commented that they have never seen a set where people are so much in love with what they are doing.

That's nice. ■



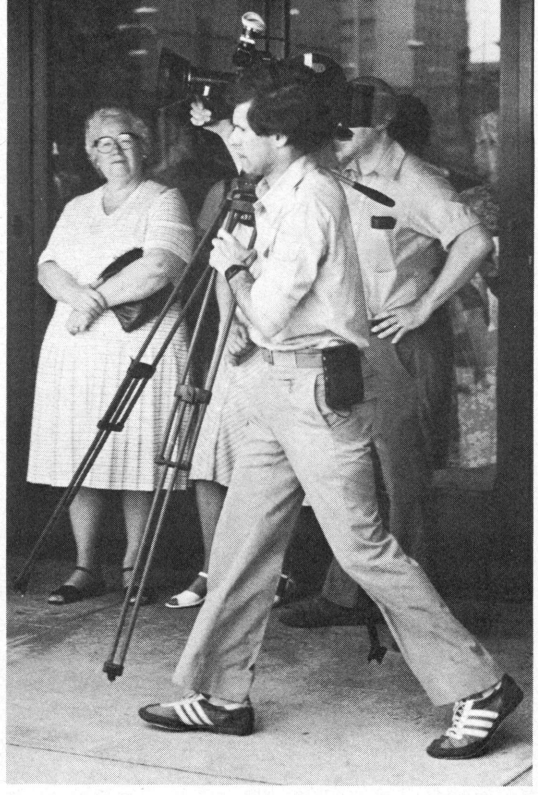
Jeannot Szwarc clowns it up with a huge slate (mammoth compared to the real one at left). A very demanding, but good-natured director, he sought cast and crew who were totally committed to the project and drew the best from them. (BELOW) Szwarc prepares to direct a moving camera scene on the main street of Mackinac Island village.



(ABOUT THE AUTHOR: Director JEANNOT SZWARC was born in Paris but fled with his parents to Argentina when Nazis occupied the French capital in 1942. Upon returning to his native land in 1947, Szwarc became a passionate film buff, seeing an estimated 250 movies a year while studying international politics at H.E.C. (a European equivalent of Harvard).

After experience on commercials and documentaries for a Paris film production company, he moved into television as a second unit director and was writer-director of short subjects. Following a depression that struck the French film industry in the early '60s, he sought work in Spain, then the United States.

Finally in 1967, he landed a job at Universal which led to a slot as writer and associate producer on such series as IRONSIDE and CHRYSLER THEATRE. Since landing his first directing position on a 1968 IRONSIDE segment, Szwarc has helmed countless episodes of hit shows like COLUMBO, KOJAK, NIGHT GALLERY and BARETTA, as well as two critically acclaimed Hallmark Hall of Fame specials. His first feature assignment was BUG, followed by JAWS 2.)



Shooting a documentary: quick moves. Camera rests comfortably on Mr. Fauer's shoulder as he hand-holds with tripod attached.

Hand-holding with the tripod on the camera! Jon Fauer talks about working with a Sachtler:

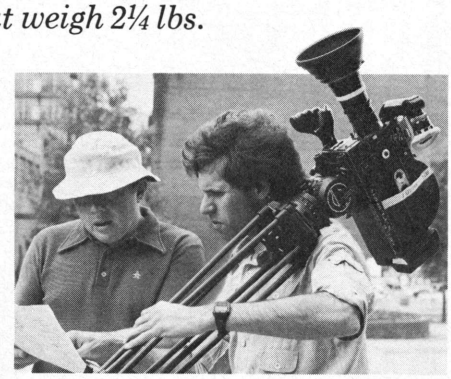
The effect on documentary style of a 6¾ lb. fluid head and carbon-fiber 58 inch legs that weigh 2¼ lbs.

"When the action isn't going to repeat and it's happening fast, you often have to go hand-held," says documentary cameraman Jon Fauer.

"But you give up a lot, of course. No steady long-lens closeups. No throwing the background out. Even staying wide, the image isn't really rock steady on a big screen. All these things you sacrifice for speed."

"I bought the Sachtler because of its incredible light weight with the carbon-fiber legs. After I began using it, I found I could make quick moves to a new angle carrying tripod and camera together. The Sachtler was the first tripod that didn't slow me down."

"The quick-release plate lets me go hand-held fast—and with the ARRI SR on my shoulder, the plate doesn't dig into me. I find I can put the camera back *onto* the Sachtler faster than I could with any other tripod."



"We spend half the time carrying the equipment around," says Jon Fauer. "Weight is important."

"Using my SR on other fluid heads, I was always fighting the counterbalance spring. Too much or too little. The Sachtler's adjustable spring gives me perfect neutral balance—with my 400mm *and* my Zeiss Superspeeds."

"The SR's tripod socket is fairly far forward on the base, and the Sachtler's quick-release plate is small. That's why it doesn't dig into my shoulder," says Mr. Fauer.

"The head is small, too. And this led to something I wouldn't have believed. In the heat of the moment, I found myself needing a hand-held shot *fast*. So I began hand-holding—*with the tripod still attached*! I forgot it was on there."

Who took the photos on this page—and why is that significant?

On this job, there was a two-man crew: Jon Fauer, cameraman, and his assistant, Jeff Laszlo. Usually, the assistant has his hands full carrying the tripod around two steps behind the cameraman. As you can see, Mr. Fauer carried camera and tripod himself. The pictures were taken by Mr. Laszlo.

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COMPUTER CONTROLLED SYNTHESIZERS FOR MOTION PICTURE SOUND TRACKS

These micro-processing marvels, properly programmed, can provide easy access to very complicated sound textures, stored for recall

By R. E. PORTER

As all electronic devices have constantly been updated, so too has the electronic music synthesizer. Through the application of micro-processor technology, it is now possible to easily access very complicated sound textures and store them in a memory for instant recall.

Alan S. Howarth has been working with such micro-processing devices since their first appearance in 1975. He worked closely with Josef Zawinul of *Weather Report* in order to apply this new technology with one of the greatest musicians of the era. Alan became an expert in the field of synthesizer programming, supplying very special sounds requested by this demanding musician and often delighting him with more imaginative results than requested.

It soon became obvious that this talent should be applied to more than just music. Sound tracks such as STAR TREK—THE MOTION PICTURE were perfect proving grounds for Alan's ideas. Through recordist Pax Lemmon at Glen Glenn sound, Richard L. Anderson supervising sound editor for the feature, contacted Alan and requested the "Enterprise" acceleration to Warp 7 as his first challenge. Two days later, Alan submitted a tape to Anderson, in turn to Robert Wise and Todd Ramsey, who were so excited with the material that it was not only used in the picture but featured in the trailer as sound effect orchestration.

Alan, now on the "Trek Team", turned to Sequential Circuits Inc., a manufacturer, and asked for access to a prototype "Prophet 10" which is a two-manual micro-processing synthesizer. This one-of-a-kind instrument yielded the massive sound of the Enterprise's impulse-warp engines, the "Wormhole" effect and many other important elements throughout the movie.

Under the demanding schedule, many vital optical effects were still incomplete even into final dubbing. This caused the unique circumstance of creating sounds using hard to decipher black and white

Continued on Page 719

Alan S. Howarth, with more than 13 years of synthesizer experience, has constructed his own synthesizers to facilitate the compositions he has been writing since 1967. Having founded Pi Corporation, his Cleveland-based music business, he is now specializing in integrating music and sound effects with motion pictures.

RESTORING HISTORIC FILMS AS A LIFE WORK

By BOB FISHER

"My work is like an ongoing detective story. I have to search for clues about how and why a film was made before I can decide how to restore it."

Kemp Niver.

Does the name ring a bell?

"Most people in the industry have never heard of me or my work," says the man who won an Academy Award for technical achievement in 1954 for his development of a process for storing and copying historical motion pictures.

The process and Niver's company are both called Renovare, which is Latin for "to restore". Niver began his self-appointed task of restoring and researching early theatrical films in 1952. His initial project lasted for 10 years.

"There was no way to copyright motion pictures before 1912," he notes. "Many movie producers, starting with Thomas Edison, tried to protect their work by copying it onto paper prints, since there was a copyright law for still pictures. They submitted these prints to the Library of Congress. Some 5,000 titles were filed between 1894 and 1912. Decades passed, and the paper prints were forgotten.

"By the time these prints were rediscovered, and someone decided to do something about it, approximately 2,000 of them had deteriorated past the point where anything could be done," says Niver, who is an associate member of A.S.C. and associate curator of the A.S.C. Museum.

Niver heard about the paper prints because he was doing security work for the Motion Picture Producers Association around the time that the discovery was brought to their attention. "I was just in the process of organizing a film crew to do second-unit work, commercials and business and educational movies," recalls Niver. "However, this other project really piqued my curiosity.

"Not too many people were interested in the paper print project at the start," Niver recalls. There were times when he kept the restoration program going out of his own pocket. In the end, he was able to restore and copy more than 3,000 feature titles onto 16mm film. He also identified all but two of these films, and created an index, often including the casts and cinematographers. In addition, Niver has published nine books based upon researching these and other historical motion pictures.

His restoration activity continued after the completion of the paper print project, and eventually Niver made the restoration of and research about historical films his life's work.

"If a film dies, a human idea dies with it. If I can do something to preserve that thought, isn't it worth doing?" he asks.

Niver's most recent project was the restoration of a five-reel feature film entitled THE LIFE OF MOSES. The movie was produced by the Vitagraph Co. sometime before 1910.

"I'd never heard of it before," Niver says. "There are probably some good arguments for calling THE LIFE OF MOSES the first feature film of its kind, though I suspect that there are also other undiscovered, equally sophisticated, motion pictures from this period."

For example, evidence uncovered during the restoration of THE LIFE OF MOSES indicates that it was one of five Bible stories produced by the film company. "That's suggested by information in the titles," Niver points out. "I think that they had in mind producing five separate Bible stories which would be combined later. We don't know at this point if that is what they did. There aren't many Vitagraph records available for research."

The print of THE LIFE OF MOSES was found by someone who sent it to the Library of Congress. "Old films like this turn up all of the time," Niver points out. "Someone opens up an old drawer or file cabinet that hasn't been used for 40 or 50 years and a piece of history is reborn."

Niver gets most of his restoration assignments from the Library of Congress, the International Museum of Photography at George Eastman House and other institutions. "That's where most people send the old films that they find," he comments.

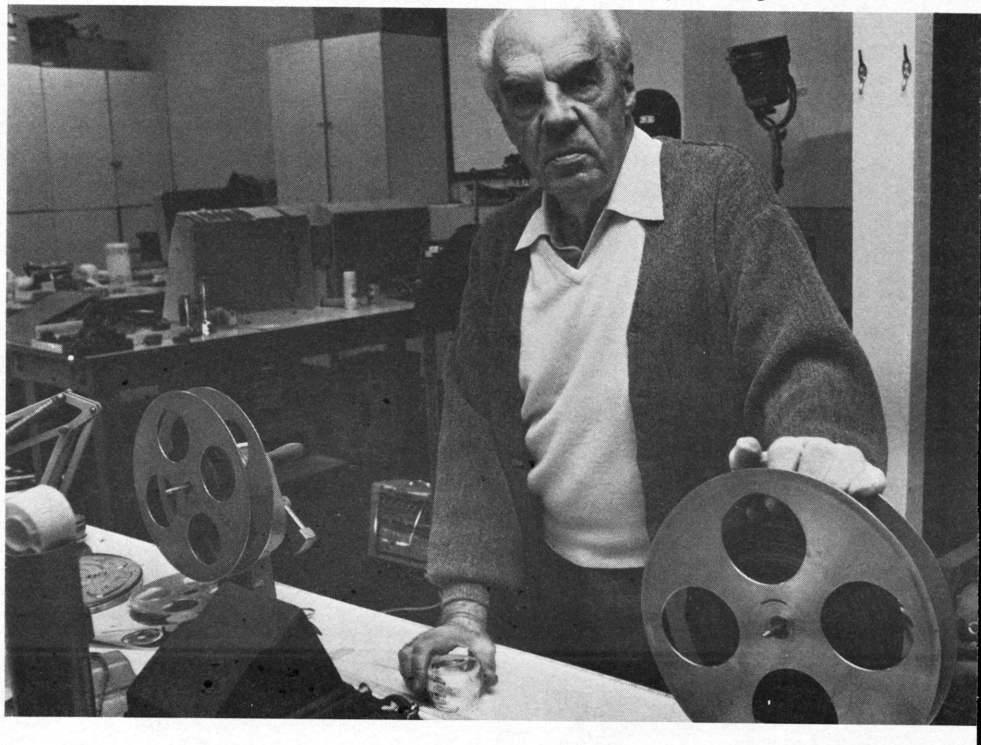
What he received from the Library of Congress on THE LIFE OF MOSES was three intact reels and two partial ones ranging from 700 to 1000 feet each, along with an order to make one 16mm color master and one 16mm color print copy.

"I'm pretty certain that what we had was a European 35mm print of THE LIFE OF MOSES. Vitagraph used a special camera which exposed twin negatives. One was used for domestic release, and the other for European issue."

The main title identifies THE LIFE OF MOSES as a Milano Film Production.

"That was the European distributor," Niver notes, "However, title blocks used as transitions are in English and they carry the Vitagraph eagle standard."

Kemp Niver won a 1952 Academy Award for the development of the Renovare process for restoring historic films. He has restored more than 10 million feet of historic film. Many of the subjects were restored from paper prints filed in the Library of Congress.



Niver has identified some 26 problems that commonly have to be solved while restoring and copying a motion picture. The first step when he receives a new assignment, such as THE LIFE OF MOSES, is the examination of the film to see how badly it has decomposed.

"I unroll the film very carefully and slowly," he says. "If the film is sticking to itself, it can never be rerolled. In that case, I handle the film in sections."

That wasn't the problem with THE LIFE OF MOSES. Instead, portions of the old nitrate-base film had shrunk unevenly. It was very brittle and many sprocket holes were torn or totally gone. "Otherwise, the film was in pretty good condition," Niver says.

The next step was cleaning the film. Niver used an ultrasonic cleaner to vibrate dirt and dust out of the print. "The film was too fragile to wipe with even a soft rag, and this is usually the case," he stresses.

While doing this preliminary work, Niver is usually able to identify the problems that he will have to solve while restoring the old film and meeting the specifications of his client. "First, I have to decide what I am looking at," he says. "Is it an original, a dupe, or a dupe of a dupe? This is important because it tells me which frame line was the original. We usually have to modify our equipment based upon the aperture size and frame line of the original."

Niver points out that during the early days of the Industry, most cameras were unique. The photographers drilled apertures in their cameras for exposing the film to suit their own tastes, and often drilled matching apertures in the projection equipment used by the producer. They had film slit to match the size of their camera aperture.

"That was one way producers were able to protect themselves from pirates," he notes. "Theater owners showing their films had projectors designed for projection at that unique aperture."

It was also possibly a reason why you never saw more than one camera used to film a particular feature. "Maybe it just never occurred to anyone that you could use more than one camera to show things from different angles, or to get maximum coverage of action sequences that were difficult or time-consuming to duplicate," he says. "However, if they did think of it, the lack of standardized aperture sizes would have presented a considerable problem."

While examining the old film, Niver also determines what type of new stock he should use to meet the specific problems and requirements of that assignment. Many scenes in THE LIFE OF

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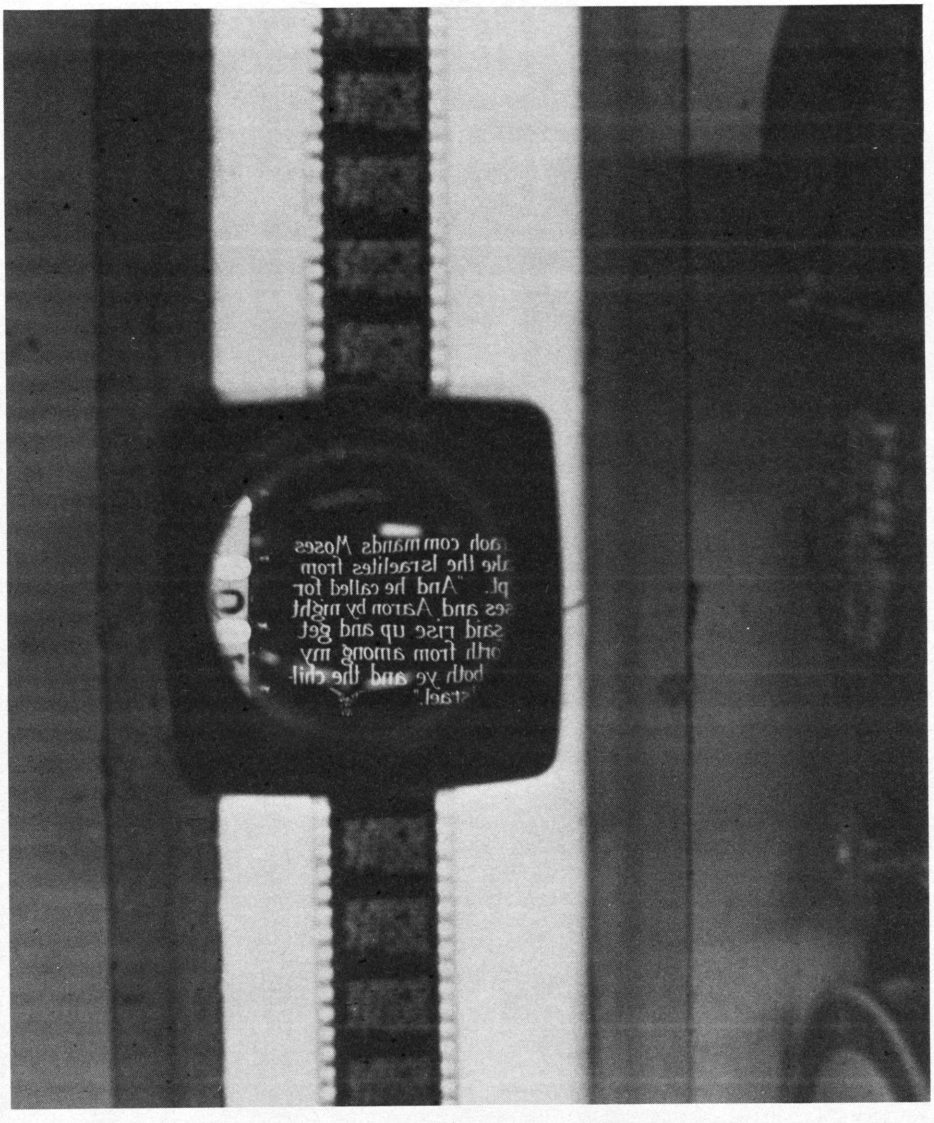

This title block is part of a copy of "The Life of Moses", a Vitograph movie made some time prior to 1910. (BELOW) Kemp Niver calls the device used to copy films "The Figment". That's because it's a figment of my imagination," he chuckles. In addition to his restoration work, Niver has published nine books based on researching historical motion pictures.

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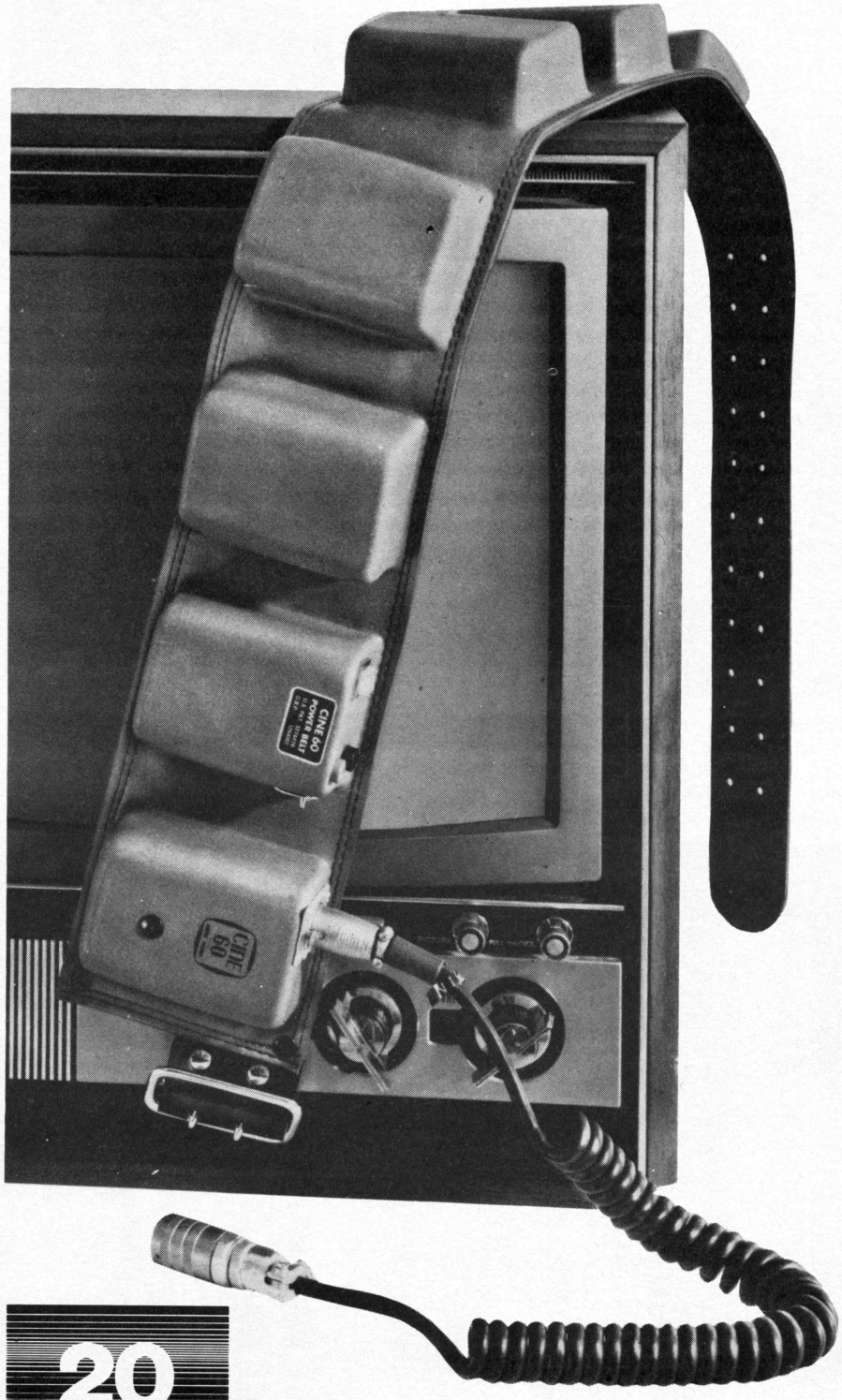

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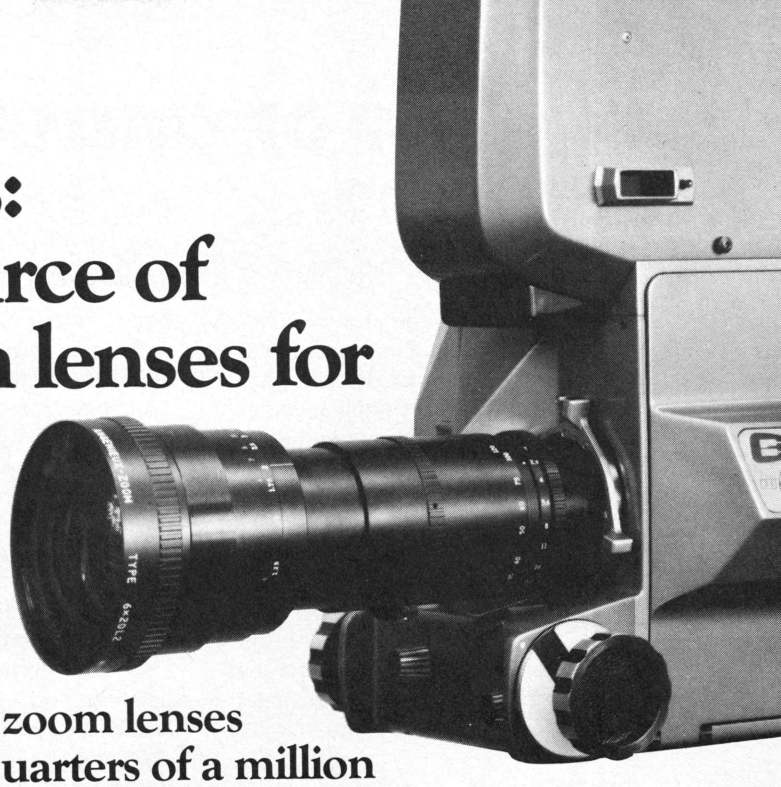

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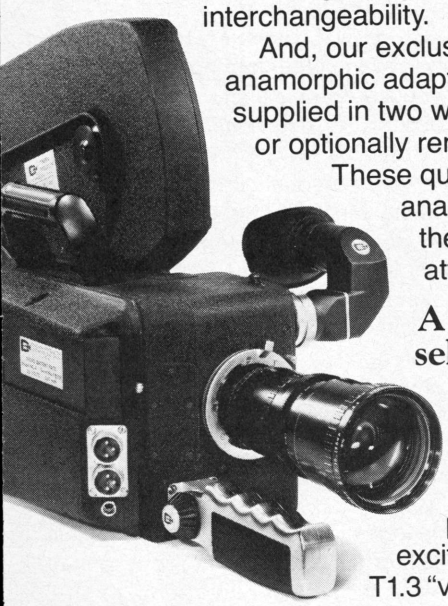

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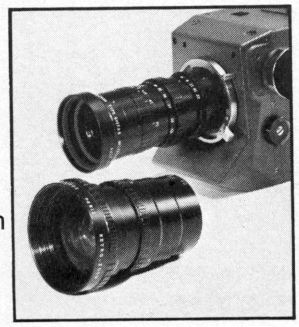

Surprisingly low cost, this ultra-lightweight and compact zoom lens is the ideal complement for our GSMO and all similar lightweight 16mm cameras.

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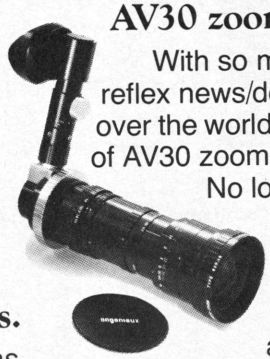

With so many of our CP-16's and other non-reflex news/documentary cameras still in use all over the world, we bought out the entire inventory of AV30 zoom lenses (with built-in 1" viewfinders). No longer manufactured by Angenieux, only very limited quantities of two of these lenses are still extant: the versatile 12-240mm f/3.5 telephoto and the ultra-fast wide-angle 9.5-57mm f/1.6 zoom lenses. Available *exclusively* from Cinema Products.

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IN QUEST OF CINEMATOGRAPHIC EXCELLENCE

By ALLAN L. WILLIAMS
Manager, Pacific Southwest Region,
Motion Picture and Audiovisual Markets Division
Eastman Kodak Company

The "paying of dues" in the learning of their craft is what gave these Academy Award nominees the experience to excell in their profession

If there is such a thing as a formula for excellence in cinematography, one of the primary ingredients would have to be experience. That's an assumption you can easily make by studying the five motion pictures that were nominated for Oscars for cinematography by the Academy of Motion Picture Arts and Sciences in 1979.

On the surface, the films couldn't be more different. In KRAMER VS KRAMER, Nestor Almendros photographed a very personal drama employing a neoclassic style of cinematography which allows the story to unfold as naturally as real life. The camera never intrudes. The result is that when Dustin Hoffman and Meryl Streep appear in the final courtroom scene, the audience feels like it is participating in a drama happening before their eyes. Both Hoffman and Streep earned Oscars for their powerful performances, and KRAMER VS KRAMER was selected as the picture of the year.

During the filming of THE BLACK HOLE, Frank Phillips, ASC, perfectly meshed performers with elaborate matte paintings and other film effects to make a futuristic flight of fantasy into a believable adventure. His painstaking attention to the smallest cinematographic details resulted in the presentation of a great escape film.

APOCALYPSE NOW presented Vittorio Storaro with a totally different challenge. He had to record a tremendous spectrum of action and emotions over a very long period of time at a remote location and make it all come together into one tightly knit film. Storaro used light and color to contrast the conflicts between cultures and between nature and technology which was at the core of the story. There are many scenes that audiences will never forget.

William A. Fraker, ASC, photographed a subtle but biting satire in '1941', where he had the unique experience of being nominated for Oscars for both original cinematography and special film effects. His footage established the mood for the film as much as the words and actions of the performers did.

Giuseppe Rotunno, AIC, ASC, melded a dream-reality world in ALL THAT JAZZ against a backdrop of the Broadway theater, and made it all seem hauntingly real. He created shadows to convey feelings and establish moods, and personally shepherded the film through each stage of postproduction right through release printing.

What do these five cinematographers have in common?

For starters, they have all paid their dues. Each of them spent many years working as assistants and operators, observing and absorbing the work of master cinematographers. Each of the five films nominated for an Academy Award for cinematography in 1979 presented some very unique challenges requiring both acquired technical expertise and innate artistic ability.

"I had to put everything that I ever learned to work, including some things that I had forgotten I knew," Phillips said in talking about the production of THE BLACK HOLE. His statement was echoed by the other four nominees when they spoke of their films.

Each of the five nominees was also challenged by having to translate onto film a very personal concept created by an outstanding director.

"My position as a cinematographer is that the director is boss," Fraker said in speaking about the making of '1941'. "If I have something to contribute and the director agrees, that's something extra . . . one of the joys of being a cinematographer is working with directors who challenge you."

Rotunno said the same thing in different words:

"My job is to use light to write images on the film in a way that brings out sensations, feelings and emotions to the audience in accordance with the script and tastes of the writer and director . . . I use my creative ability and technical knowledge in harmony with the writer and director."

Storaro said: "Francis (Coppola) gave me the freedom to express myself, and he encouraged me to do so. However, it was his incredible personality that gave us the vitality to work harder each day to sustain the level of emotion that was reached in the very first sequence we

(ABOVE LEFT) The author, Allan L. Williams, addressing guests at the banquet when Eastman Kodak honored the five Academy Award nominees just prior to the "Oscar" presentation. (BELOW RIGHT) A scene from APOCALYPSE NOW, Francis Ford Coppola's searing drama of the Vietnam war, which won for Director of Photography Vittorio Storaro his "Best Cinematography" award.

filmed."

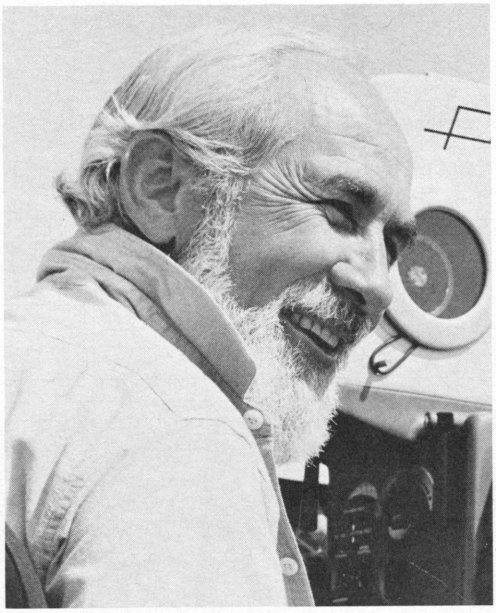
It was the third consecutive year that Fraker has been nominated by his peers in the Academy. In 1977, they judged LOOKING FOR MR. GOODBAR among the five best photographed films. In 1978, HEAVEN CAN WAIT made the list of final contenders. Almendros earned a 1978 Academy Award for photographing DAYS OF HEAVEN. Phillips, Storaro and Rotunno were all nominated for the first time this year.

Eastman Kodak Company proudly acknowledged the achievements of these five Oscar nominees at our fourth annual pre-Academy Awards banquet. The purpose of this occasion is to recognize the excellence of the work done by the nominees, as well as to draw attention to the overall contribution that cinematographers are making to the entertainment film industry.

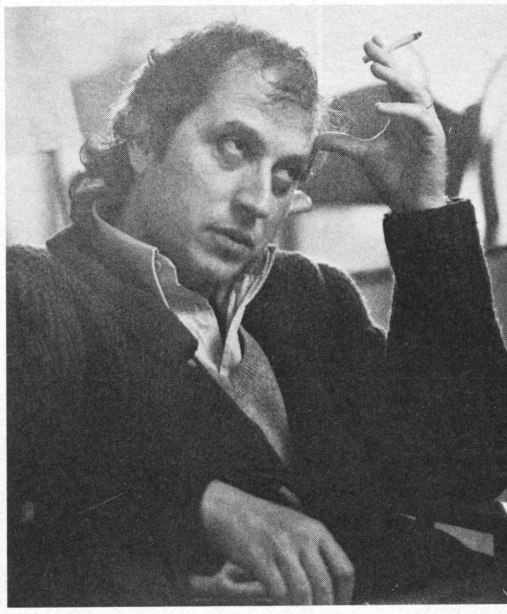
In effect, we ask the five nominees to stand in proxy for all cinematographers. By celebrating their work, we hope to draw attention to the important role that all cinematographers play in the making of quality theatrical films.

Vittorio Storaro is the recipient of the 52nd Annual Academy Award for cinematography. His great work provides a standard for judging the state of the art of excellence in cinematography at this particular juncture in time. APOCALYPSE NOW is a film that everyone associated with the cinematographic part of the industry can appreciate and share his pride in.

However, all five nominees must take special pride in knowing that their work was singled out by their peers, other Directors of Photography, who are the people who best appreciate what it takes to create an outstanding motion picture.



WILLIAM A. FRAKER, ASC



VITTORIO STORARO

That recognition is growing. Today, most producers and directors select cinematographers for feature film assignments with the same care and thought that they give to auditioning talent, maybe more. Even the public's awareness of cinematography and cinematographers is increasing. More and more, you see the names of cinematographers in movie advertisements and in the entertainment pages of newspapers and magazines. Many of the names are taking on a star-like quality, and deservingly so.

However, as important as it is, much more than artistic ability is at stake when a producer and a director select a cinematographer for the making of a film. There is also the need to consider the cinematographer's ability to shepherd a film to completion. The stakes are very high.

The feature film industry is in a state of rapid transition. There is sharpening competition for both the public's leisure time and dollars. Participatory and spectator sports are attracting record numbers of people. The live theater, in various forms from stage plays to concerts, is thriving.

There is even increasing competition from television. In addition to the regular commercial channels, pay and cable TV are coming on fast as alternate providers of film and other entertainment. Look for new technologies such as satellite distribution of programming, and home entertainment centers featuring videocassettes and disk display on large pro-

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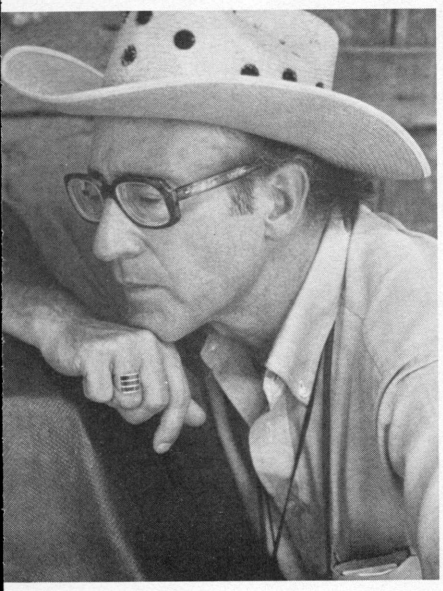
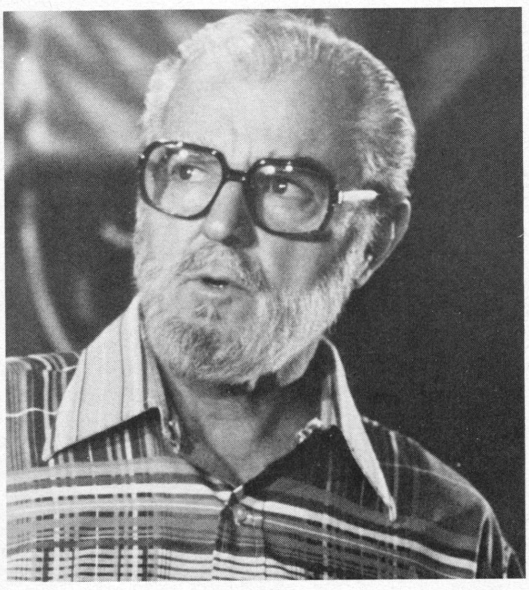
NESTOR ALMENDROS



FRANK PHILLIPS, ASC



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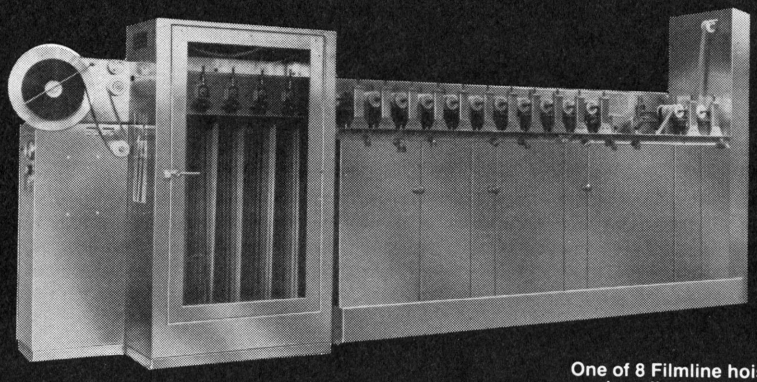

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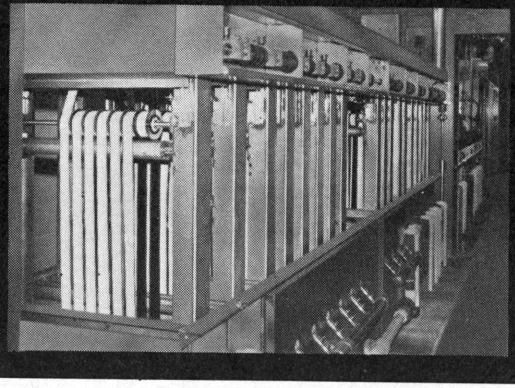

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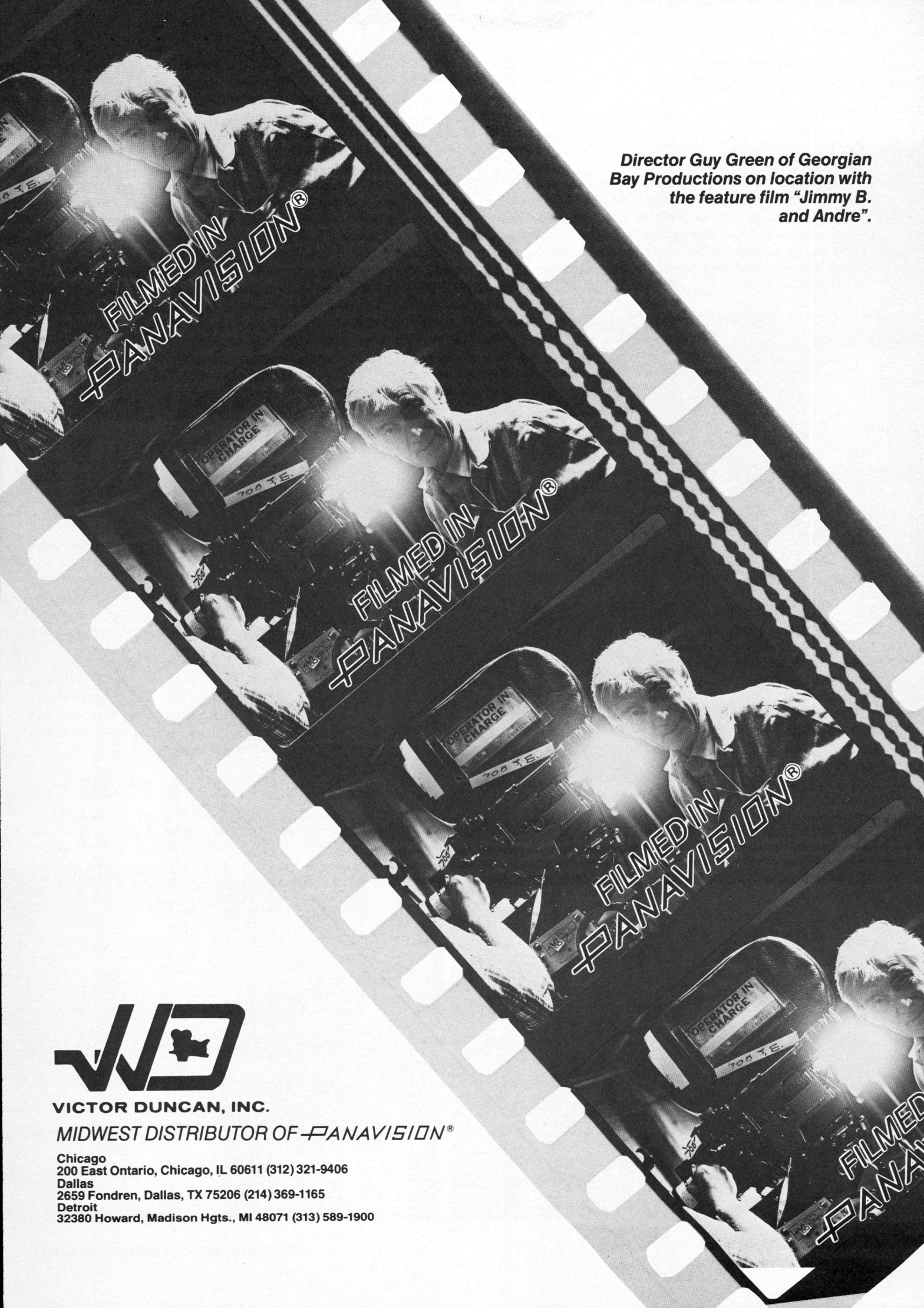

Director Guy Green of Georgian Bay Productions on location with the feature film "Jimmy B. and Andre".

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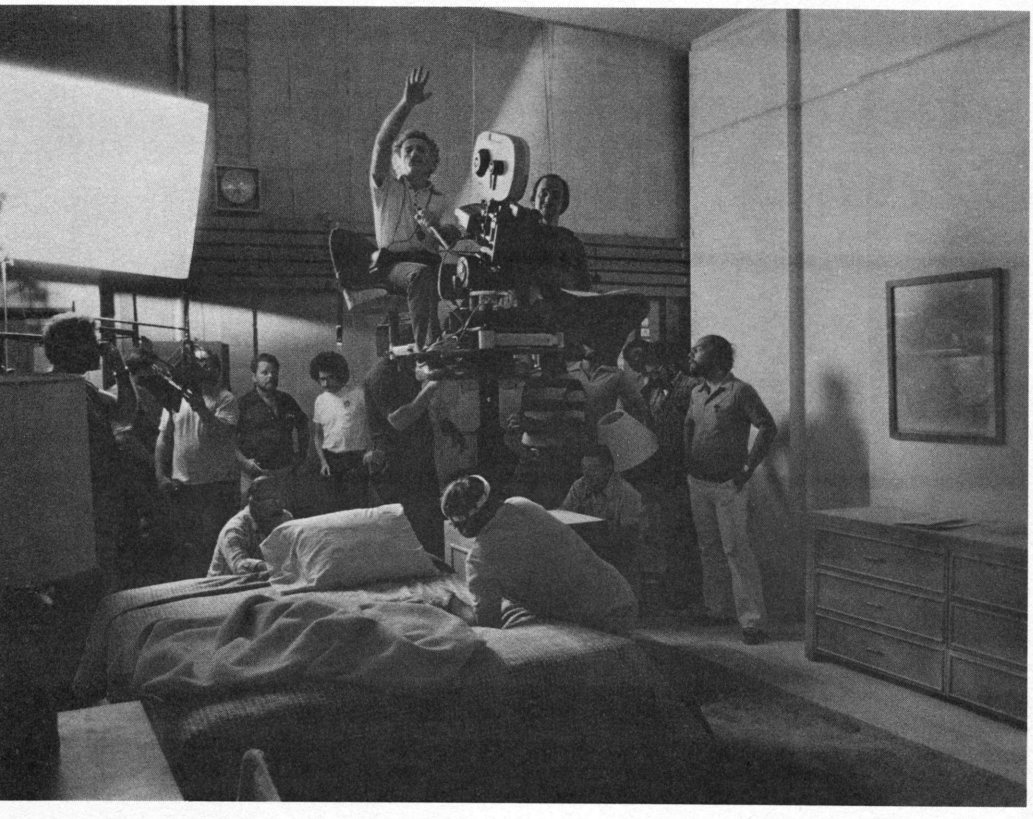
FILMING IN TIME WARP
Continued from Page 670

MANKOFSKY: There were other technical aspects to achieving that difference. In the contemporary sequences of the film (1972-79), we did a lot of long lens work. When I say long lens, I'm talking about 75mm, 100mm, 200mm and 300mm, plus the occasional use of a zoom lens. In the period sequences of the picture we used wider angle lenses that showed the background more–focal lengths such as 35mm, 29mm and 24mm. This method added up to two totally different approaches in terms of photographic style.

QUESTION: What about the use of filters to enhance the visual difference between the two time periods?

MANKOFSKY: We really didn't use very many or very heavy filters on the show, because the difference in film stock did more or less what certain filters might have done. We did use filters to some extent on Jane Seymour, the female star of the picture, because she was supposed to look almost ethereal. We used some of our black nets. In order to work into the nets (so that the change in image characteristics would not be quite so sudden), in all the scenes leading up to her closeups we would use a lighter black and then go to a heavier black for the actual closeups. Jeannot is a super director and without his ideas none of this could have come about.



QUESTION: Can you tell me about some of the difficulties encountered in making this film?

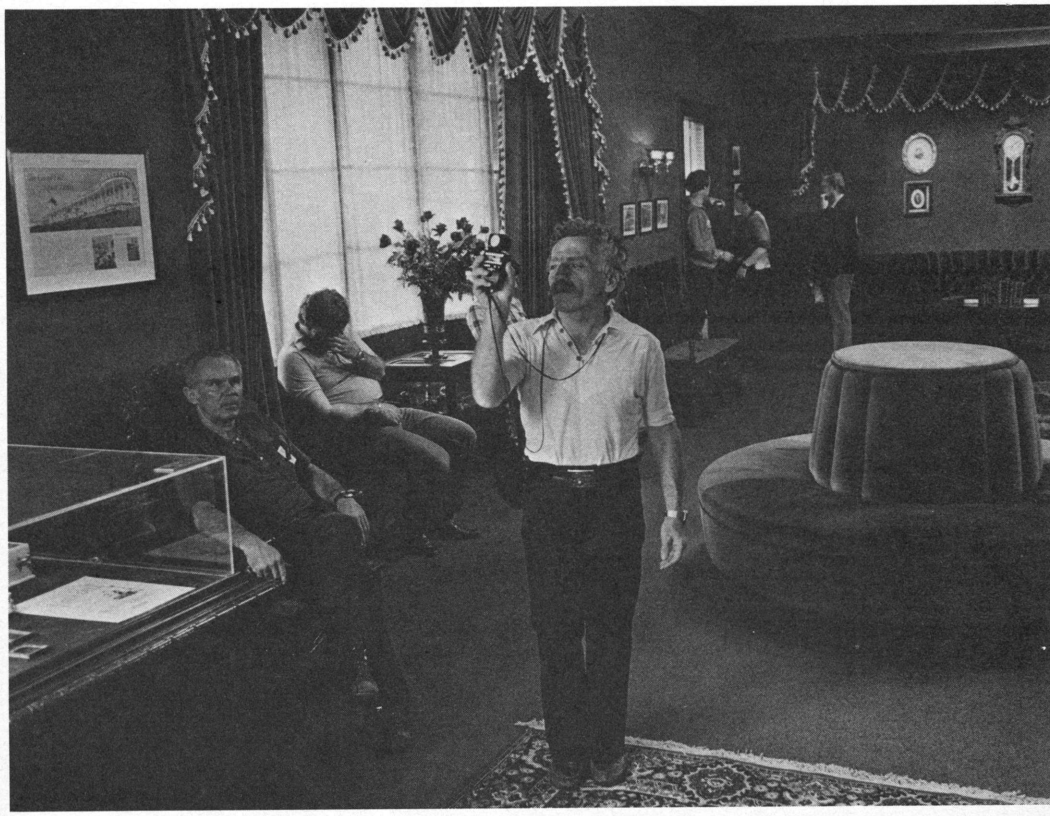
MANKOFSKY: Most of the difficulties were logistical–like just doing a feature film in a place like Mackinac Island, where one hasn't got total access to the outside world and transportation and communication with our home base in Hollywood were very difficult. However, our reason for going to Mackinac to shoot has to do with one of the stars of the film. The two major stars of the film are Christopher Reeve and Jane Seymour, but the third is the Grand Hotel–which is as much a star of the movie as our two people. There are only two or three hotels in the country that would have been suitable and this was the choice.

QUESTION: It is my understanding that the entire film was shot on Mackinac Island, including scenes that would ordinarily have been filmed in the studio. Is that so?

MANKOFSKY: Yes. Since there was a

Mankofsky gives the gaffer instructions while preparing to shoot a scene on the sound stage that was part of the former Moral-Rearmament motion picture production complex on Mackinac Island. (BELOW) Mankofsky and Szwarc check out a set-up in which one camera is remotely run from a mount on the hood of the automobile, while a second camera is hand-held by an operator riding beside the driver.

complete film studio on the island, we decided to build interior sets there and use them as cover sets, thereby saving considerable money. The transportation on the island was a problem because motorized vehicles have always been banned and we were allowed only a certain limited number of vehicles. Even those were permitted with great reluctance on the part of the local population. Every time we moved a vehicle it required a permit from the State Park Commission, plus a town permit. The State Park Commission wanted to know in advance whenever a vehicle was going to be used and moved through an area under their jurisdiction. Also, when a vehicle arrived at a location it had to be parked and had to stay there all day. We could not use any kind of motorized vehicle for transporting people. For that purpose we would have to use the local carriages or bicycles and we had to use freight wagons (drays) to move our equipment to and from the trucks. All of that imposed certain restrictions on how fast we could move, since the trucks were usually parked far from where we were shooting.



Mankofsky takes a light reading on the set representing a small museum in the Grand Hotel where Christopher Reeve falls in love with the photograph of Jane Seymour. This was not a set built on the sound stage, but rather a small dining room in the hotel which was re-dressed to appear as the museum. Public areas of the hotel were used for filming, but not the private rooms, as these were fully booked.

QUESTION: Getting back to what you said about actual physical methods of creating a visual difference between the two time periods, how did that translate into lighting techniques?

MANKOFSKY: In the contemporary sequences the lighting is a little harsher—less "sourcey", you might say. The light appears to be coming from overhead and it's a bit on the flat side. For the period sequence we used very, very soft lighting—a lot of lamps and candles, with source lights appearing in the shots as much as possible.

QUESTION: You said earlier that very few filters were used in the filming. Does that pertain to the period sequences, as well? I should have thought you would do something with fogs or low-contrast or diffusion—or wasn't it necessary?

MANKOFSKY: One of the things we determined in our tests was that we really didn't have to do that. However, for the contemporary sequences we did use low-contrast filters to some extent, but only because some of the exteriors were getting a little harsh, due to the extremely clear air on Mackinac Island which made everything come through very crisp and sharp. Paradoxically, we wanted a crisp-looking picture. We didn't want the look of a film that had been filtered too much. It got enough softening through the use of the Fuji stock alone, without going to heavy diffusion. I had a coral attenuator which I used on some sunset shots (and which I had made for THE MUPPET MOVIE) and I used a few coral filters here and there for late afternoon—but other than that, no filters.

QUESTION: Your method of using two different film stocks to photograph the two time periods of the story is ingenious, but the sort of thing that makes production accountants and other fiscal types cringe. Did you encounter any opposition from the studio on that score?

MANKOFSKY: Not opposition exactly, but the studio people did want to know why we couldn't use Kodak film all the way through and just let the lab do something to create the effect we wanted. Well, quite honestly, anytime you do anything in the camera yourself you are better off than trying to rely on somebody else to do it later, because you never can quite get what you want later. Sometimes you get close to it and sometimes you don't, but when you get involved with other departments and other disciplines, the original idea often gets lost; it isn't quite the same. All of the various methods that could be used for softening the image on Kodak film ultimately add up to degrading the original product made by Eastman, and you would still not get the effect that we have achieved by using two stocks. One always has to use the tools that one has available, and the Fuji stock is another tool. I honestly feel that the Kodak stock is far superior in many respects, but in this case, Fuji was the more desirable stock for the effect that we wanted. Fuji could give it to us without having to resort to pre-fogging, post-fogging, fogging the interpositive, low-con filters or nets. Any of those methods would probably have been usable, but I don't think that any of them would have quite achieved the effect that we wanted. I'm sure that there will be a lot of discussion and arguments about it, but anytime there is a job to be done and you get 100 people together, you'll get 100 opinions on how to do it. This is just the method that we decided upon.

QUESTION: Switching from purely technical considerations for the moment, can you tell me a bit about your working relationship with Jeannot Szwarc?

MANKOFSKY: Jeannot is one of the best directors I've ever worked for and with. He's got very, very good ideas and he's very definite about what he wants, but

he's not doctrinaire about it. He's willing to listen and collaborate and discuss things and he's flexible enough so that if something doesn't work one way, he can adapt the situation to another way of getting the result. I read an article in a magazine by a director who was writing about how an ace cameraman can make a director look good. I very much dispute that theory, because it is my feeling that in most cases the opposite is true. The more demands a director makes, the more critical he is, and the better he is, the better the cameraman will look. A cameraman can't make a director look good unless he takes over the film—which is not his function—but a director can make a cameraman look extremely good if that cameraman can create, execute and help contribute to the demands of a demanding director—and Jeannot is that kind of director. He knows what he wants; he communicates well and, in communicating, he encourages. As a result, I, as a cameraman, am able to work more comfortably with him and deliver for him. The nicest part of working on SOMEWHERE IN TIME was working with Jeannot as director. He was marvelous and it would be hard for me to praise him too much.

QUESTION: You spoke earlier of using wide-angle lenses on the period sequences in order to include more of the background, and that would imply a deep-focus approach. Did you have any depth of field problems as a result?

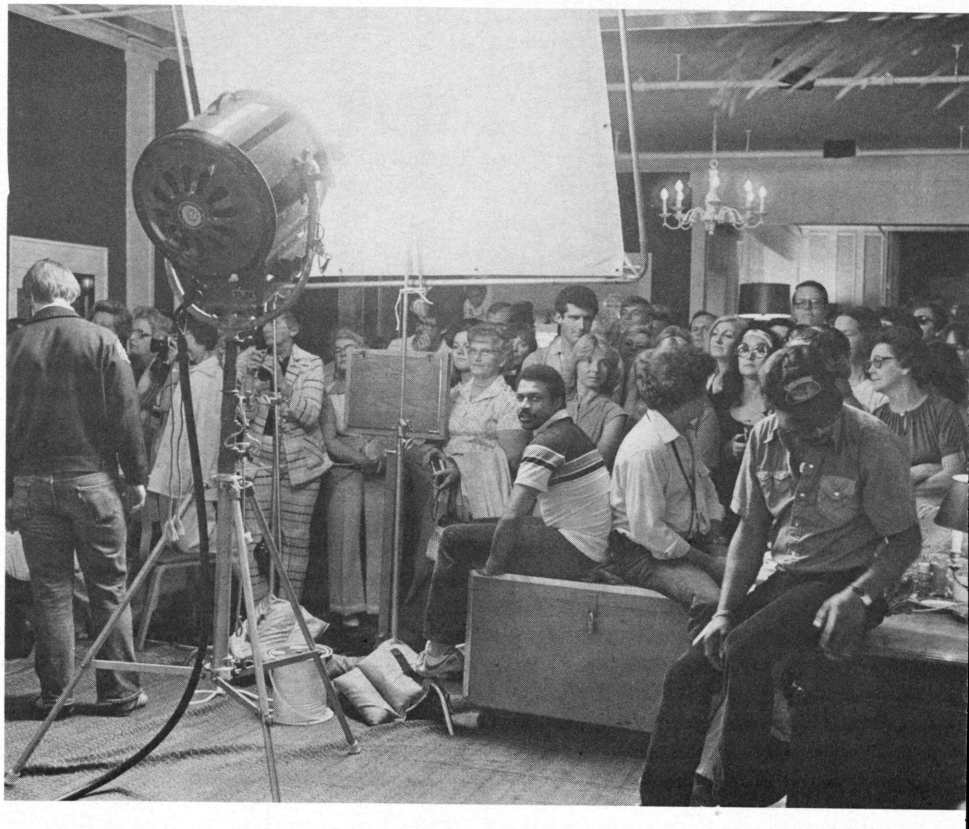
MANKOFSKY: No, because I made use of another special tool when it came to making that kind of shot. For example, there was a dialogue scene between our two leads standing in the doorway of the hotel dining room in profile and with significant action in the background. In this case, I used a split-diopter on either side of the frame in order to have our actors sharp while, at the same time, maintaining deep-focus into the dining room. I'm sure it wasn't the first time that's been used, nor will it be the last, but it's a very effective use of the split-diopter where you want to maintain deep-focus and there is no other way of doing it without pouring in an incredible amount of light—which is prohibitive on location.

QUESTION: In viewing the film, I noticed that you hardly used the zoom lens at all. Was there any special reason for that?

MANKOFSKY: Well, my feeling about the zoom lens is that it is an effective tool when it is used properly, but its function can also be abused in such a way as to detract from effective storytelling. The tendency is for it to be overused as a time compensator, especially under the tight time schedules that are the norm in filming for TV. But when one switches over to theatrical features where there is more time, there is no reason to depend heavily on the zoom. For example, there is a tendency to use the zoom instead of dollying. A dolly shot, in my opinion, not only looks better on the screen, but creates a different effect from that of a zoom shot. In a dolly shot you are travel-

Continued on Page 720

The crew readies a long dolly forward. A great deal of camera movement was used in this picture—not for its own sake, but to facilitate the plot and further the telling of the story. (BELOW) Light is bounced off a scrim to provide soft illumination for the opening sequence, which supposedly represented a college lounge. The MRA complex, which had gone through a brief incarnation as a college, provided the set.



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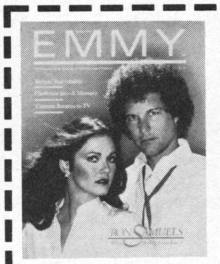

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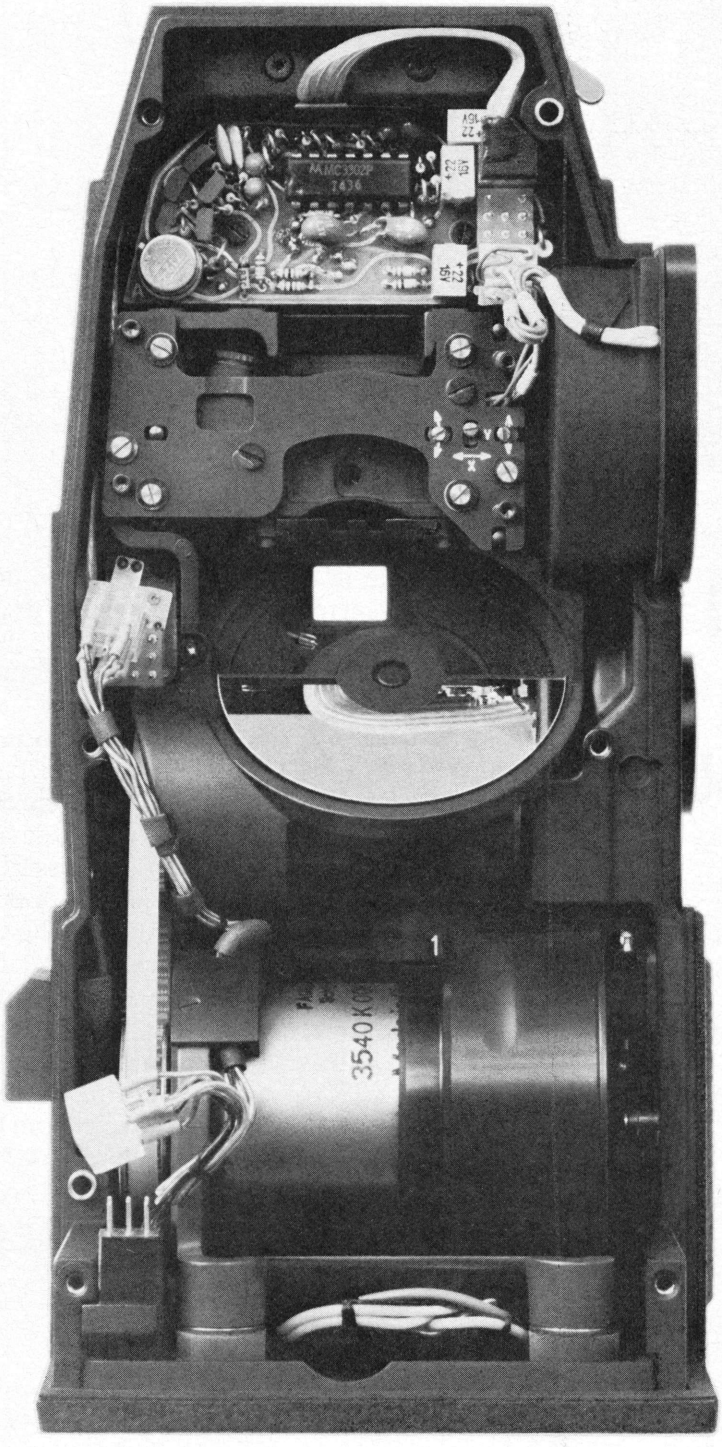

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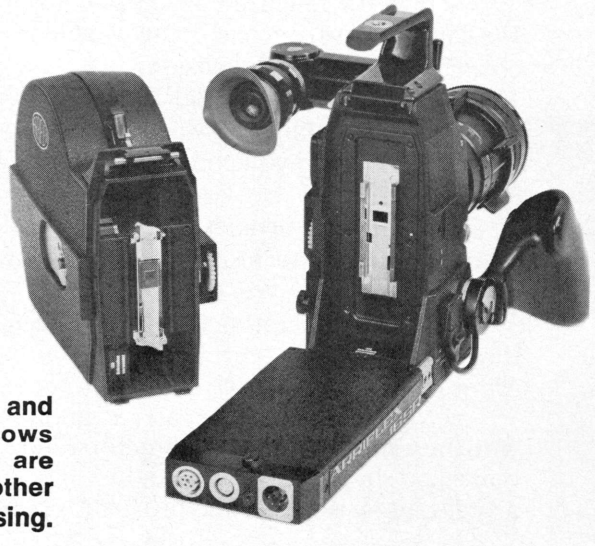
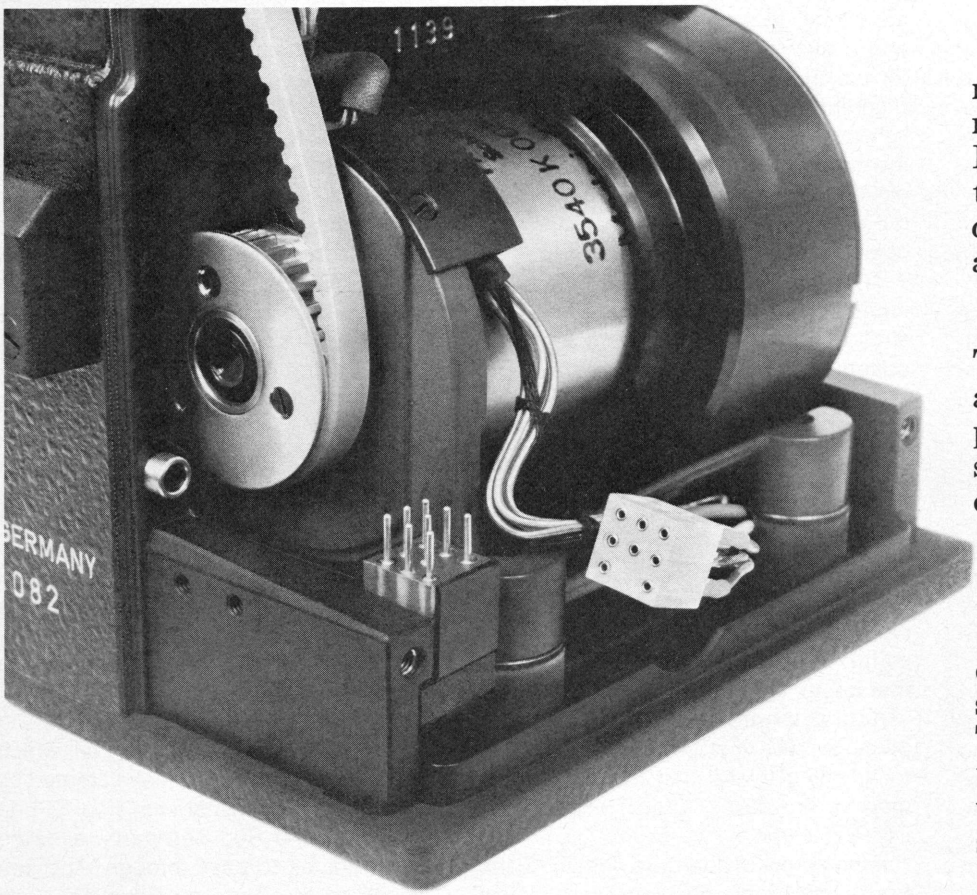
The big photo at left shows the front of the rear half of the 16SR camera housing *(see caption below it)*. In the top right corner, you can see one of several plugs. Eight gold-plated pins, pointing directly at you—two in the top row, three in the rows below.



Small photo at right shows 16SR with magazine removed. You can see film channel and aperture on the camera housing. That housing consists of two modular die-castings: front and rear. Big photo above shows front of rear casting. You are looking at aperture from other side—from *inside* the housing.

Technology of the 16SR/One of a Series:



In big photo at far left, you can see wiring harness emerging at various points inside rear half of camera housing, plus several gold-plated pins and sockets. Photo above is a closer look at one of those. Note that pins and sockets are *keyed* so they can be connected only one way, to ensure correct polarity. Photo at far left is the actual size of the compact 16SR camera housing.

Those pins are part of the wiring harness of the rear half. They connect with a gold-plated socket that's part of the wiring harness inside the *front* half of the camera housing.

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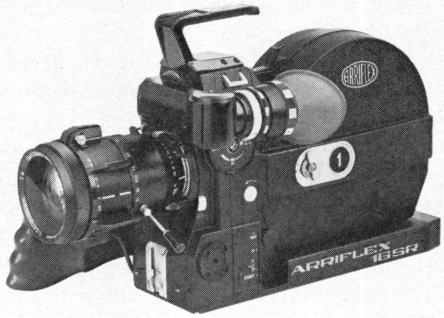

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RESTORING HISTORIC FILMS AS A LIFE WORK

Continued from Page 679

MOSES were hand-painted. "This was done to create a mood or to convey other information," Niver says.

Five different hues were used. For example, the scene where the plague of blood was brought upon the Egyptians was tinted red. When there were three days of night, the scene was tinted black. Yellow tinting was often used for transition scenes.

"This gave us two main problems," Niver says. "One was that we wanted to reproduce the original colors as faithfully as possible. A much bigger problem was that the hand-painted frames diffused the passage of light through the film, making it much more difficult to get a sharp exposure."

The latter was complicated by the fact that, as with all films of its period, THE LIFE OF MOSES was on a nitrate-base stock. "We usually reflect light off a mirror while blowing air on the film, so there is no heat to ignite the nitrate base," he says. "The more light you need, the more difficult this procedure becomes."

Another consideration affecting the selection of film stock was the need for maximum latitude. "We needed all of the help we could get for holding depth of field, because in order for us to copy the aperture area onto a new stock, our taking lens would be only four inches from the film," Niver says.

Niver consulted with Dr. Roderick Ryan and other technical specialists at Eastman Kodak Company's motion picture and audiovisual markets division office in Hollywood. "They were very helpful and suggested that I test three different camera films," Niver relates.

After testing the different stocks, he chose Eastman color negative II film 7247 as the original material for restoring THE LIFE OF MOSES. "The film is rated for an exposure index of 100 in 3200°K tungsten light," he says. "I had to shoot practically wide open while I was copying the hand-painted frames. However, the fine grain and latitude allowed me to make a very sharp reproduction even with the very short taking area. The color rendition also turned out about as close as you could get to the original."

Once he selected a shooting stock, Niver picked five or six frames from each reel and exposed each of these at a different lens opening. The exposed test frames were processed by CFI Labs in Los Angeles, and examined with a ground glass on a light table. "This gave me the information needed to properly expose the restored film," Niver says.

"The Figment" is the name Niver calls the equipment used for making the copies. "That's because it's a figment of my imagination," he chuckles. "Obviously, you can't use a conventional contact printer. That would tear and burn up the original film. So what you need is something to hold and move the film, and a through-the-lens viewing camera for making the copy. The sides of 'The Figment' have to be open so we can get light reflected from a mirror and air on the original film. I also have to be able to move the old film by hand if necessary, for example, if a section of sprocket holes is missing."

There are elements of "Figments" standing at Niver's Hollywood-based studio. Based upon the assignment, he adapts one of these for the task at hand, often pirating parts and components from the others.

A key component of "The Figment" used during the restoration of THE LIFE OF MOSES was a pre-1914 35mm Pathe camera. Niver used a matte aligned behind the projector aperture to define the taking area in conjunction with the original size. "I believe that we have made mattes to match all of the aperture sizes that we are likely to deal with," he says.

Actual exposure is a painstaking process. "The first thing I do is register to anything in the first frame that isn't moving," he says. "Then I expose one frame at a time."

If the sprocket holes are damaged, the film is moved into position with a gloved finger, working with an assistant, one behind the camera and the other moving the film. Niver says that he copied between five and 500 feet daily depending upon the condition of the film.

"No one is ever going to get rich doing this work," he emphasizes. "It is slow and painstaking. You do it because you believe that it is important to retain and understand these bits of history."

Niver did his homework and that paid off in the quality of the restoration of THE LIFE OF MOSES. "The lab printed two reels on one light and there was only a one-light difference on the other," he says. "Even though we were dealing with five densities caused by the hand-painting, there was no more than half a stop difference on the copy. That also says a lot for the latitude of the color negative film."

As usual, Niver learned a great deal about the history of the industry in the process of restoring the film. "THE LIFE OF MOSES was a lot longer than most films we have seen from this period," he notes. "Most productions were limited by the reel capacity of taking cameras and projectors. It was news when someone produced a two-reeler."

THE LIFE OF MOSES is also a very sophisticated production for its time. There were camera movement and establishing shots. For example, there is a long shot where Moses casts his staff down at the feet of the Pharaoh. The next shot is a close-in take of a writhing snake at the feet of the Pharaoh. That took some planning, Niver points out.

There is also evidence of special effects, including lightning and hail, which Niver believes they may have created by scratching the original emulsion. In one sequence, the Red Sea parts, allowing the Israelites to pass through. The sea closes on the pursuing Egyptians, and the scene concludes with a very dramatic shot of the sea closing around a single clenched fist.

This looks like a triple exposure to Niver. "They probably shot the water coming from the left," he says. "Then they most likely recranked and shot the water coming from the right. It looks like they recranked again, and filmed the

A 1907 Powers projector was modified to transport film past the lens of a reflex camera. Actual exposure is a painstaking process. "The first thing I do is register to anything in the first frame that isn't moving," says Niver. "Then I expose one frame at a time."

people passing through the same area. When they put it all together, it was the next closest thing to an optical effect closing on a dissolve. It was primitive, but very effective.

"All of this is a very far cry from the one-reel features where the camera never moved from a fixed position that seems to be more characteristic of the films that we have seen from that period," he says.

"Their use of costumes and scenery was also pretty accurate as they conformed to Biblical depictions of that day," he continues.

Niver also points to very effective use of painted backgrounds. "The paintings are as good as anything that you see today. This shouldn't be too surprising, since there were a lot of people around who painted backgrounds for the live theater," he notes.

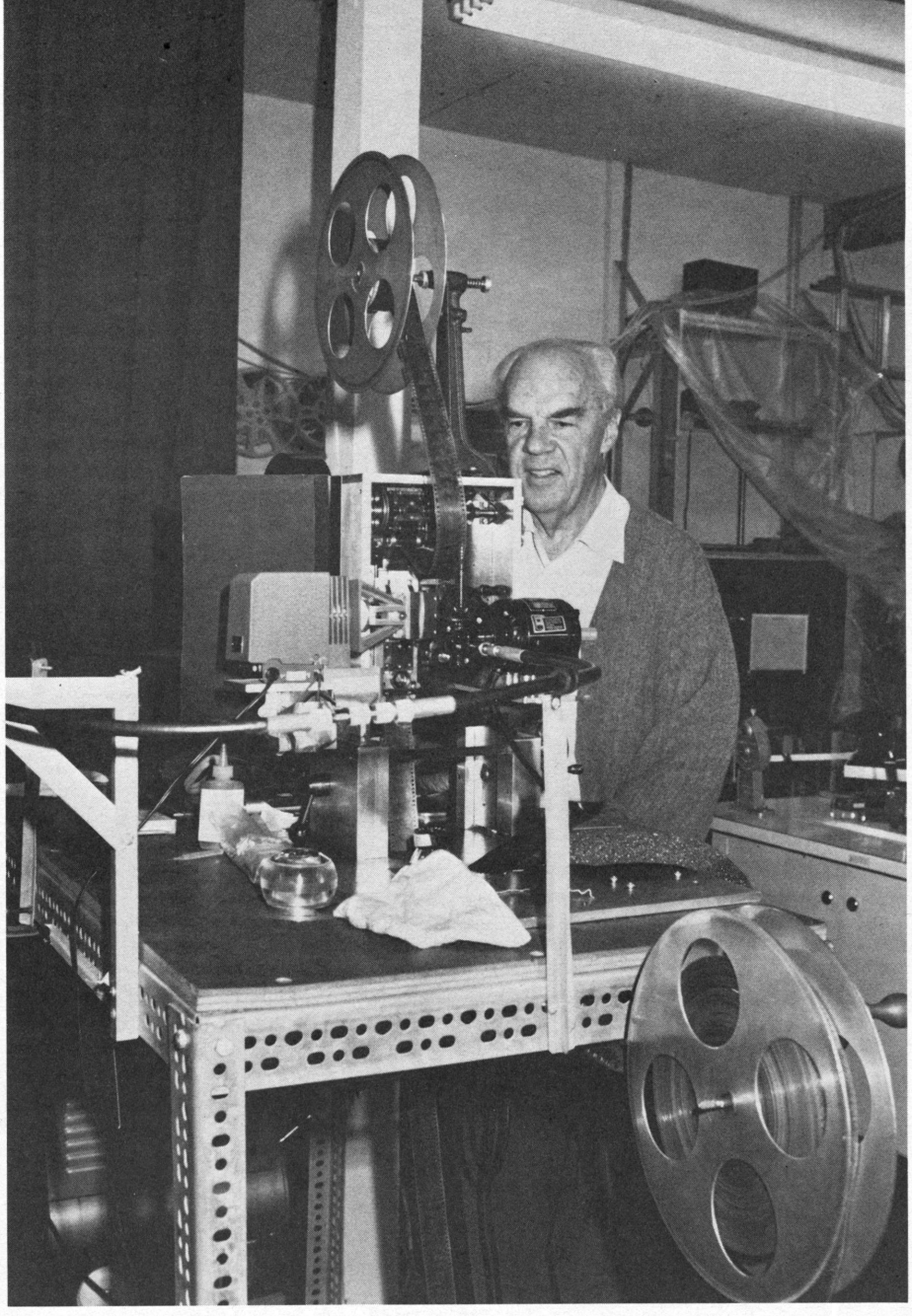
However, Niver also points out that the backgrounds are in proper dimension to the props and people in the foreground. "That also took a lot of forethought and execution," he says.

Niver estimates that he has restored approximately 10 million feet of film since he began the paper print project. "I've learned a great deal," he says. "If I give myself credit for anything, it is for recognizing that these motion pictures are the history of the beginning of movement in photography," he says. "They are the start of a new form of communications; a transition from the spoken word to visual literacy."

During the 10 years that he worked on the paper-print-restoration project, Niver painstakingly studied and recorded the contents and context of each title. He noted the evolvement of such techniques as camera movement and special effects. "After a while, I could tell who photographed which picture just by looking at the film," he says.

He also noticed that some things haven't changed. "There was a series of one-reelers apparently done by the same person using a formula which we haven't veered from very much," he recalls. "One one-reeler entitled THE TUNNEL WORKER is a brief documentary-style movie focusing on the digging of a tunnel connecting two burroughs in New York City.

"There was a lot of interest in that sort of thing in those days," Niver says. "They obviously shot on location where a tunnel was being dug, and they also built a set there. The counter plot involved a love triangle between one of the workmen, the foreman and the wife of one of them. Just change the tunnel to a supersonic jet or some other optical bit of technology, and you have the plot for a modern motion picture."



A key component of "The Figment" used during the restoration of THE LIFE OF MOSES was a pre-1914 35mm Pathe camera. Niver used a matte aligned behind the projector aperture to define the taking area in conjunction with the original size. "I believe we have made mattes to match all of the aperture sizes that we are likely to deal with," he says.

Another one-reeler obviously made by the same producer, featuring most of the same players, is based upon the construction of a 10-story "skyscraper" that "towers" over Manhattan. "The subplot focuses on an ethnic conflict between workers," Niver says. "One of them steals something from the foreman and plants it with the personal property of another worker who is then blamed. That sounds familiar, too, doesn't it?"

Not all of the challenges presented to Niver fall into the same category. Not too long ago, he received a film made of a parade celebrating the centennial of Connersville, Ind. The film was made in 1916 by a photographer who was using a camera rented from a company in Cincinnati.

"What apparently happened was that he wasn't familiar with a British-made camera that was provided, and he threaded it on his tripod upside down," Niver says.

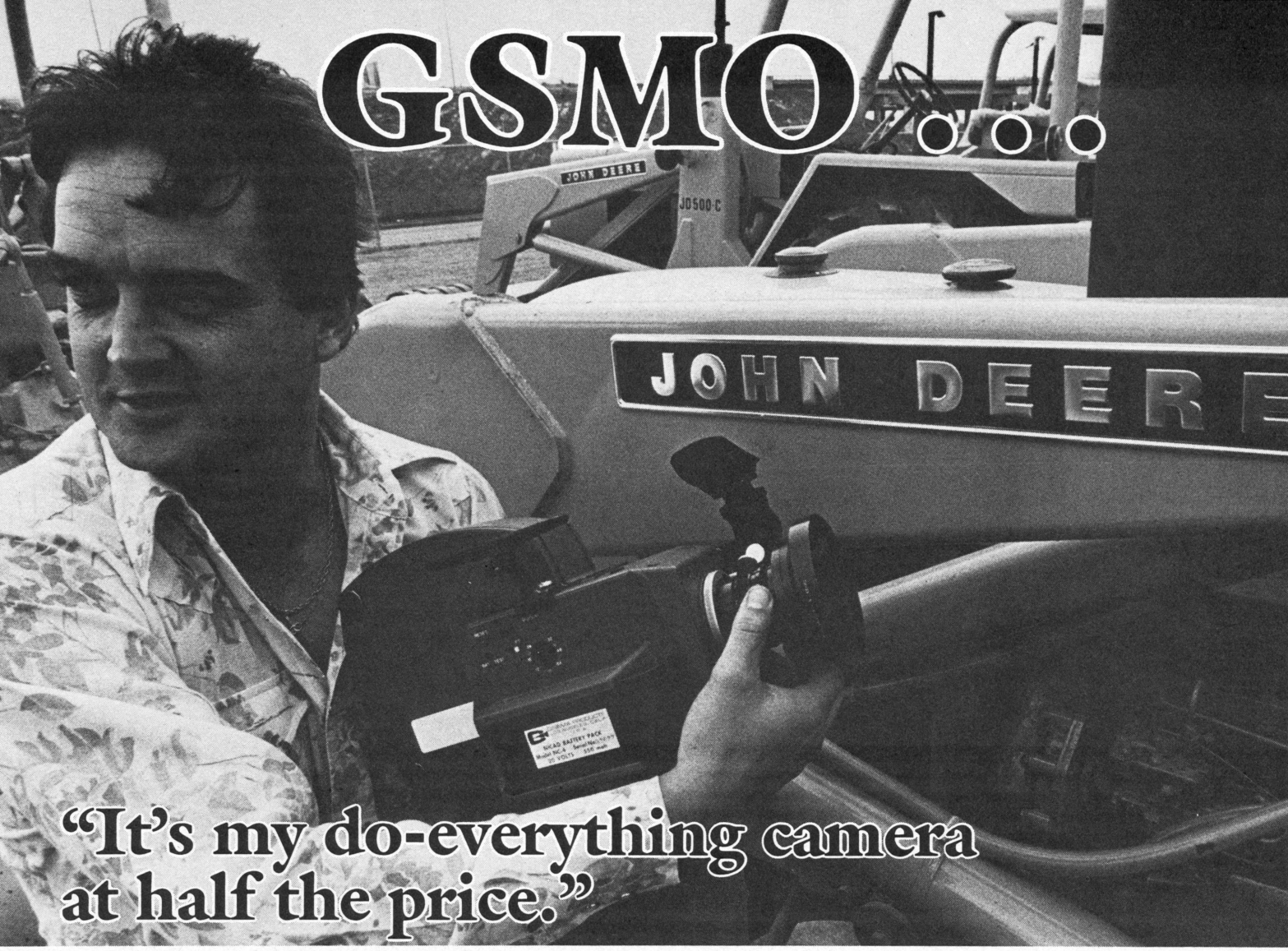
The film was apparently filed and forgotten until very recently. "In this case, they asked me to both restore and flip it so the new copy could be projected right side up," he says.

"My work is like an ongoing detective story. I have to search for clues about how a film was made and why before I can determine how to restore it," Niver notes.

Some projects are fairly routine. Others, such as restoring THE LIFE OF MOSES have great significance for anyone involved and interested in the roots of the entertainment film industry.

"I never know what new adventure tomorrow will bring," he concludes. "And that's the way that I like it." ■

GSMO...



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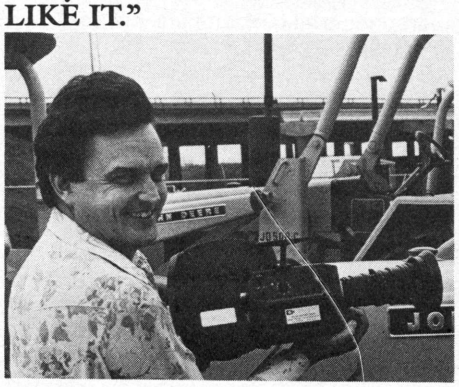

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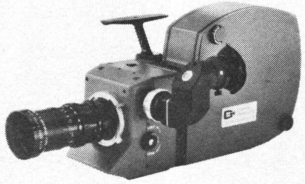

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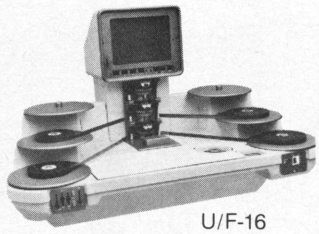

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ON LOCATION WITH "SOMEWHERE IN TIME"
Continued from Page 666

dollars have been spent to improve the hotel and the grounds.

In 1978 The Grand again underwent a thorough facelift and further enlargement. Resident architect Richard Bos was responsible for major structural improvement that included replacing huge cedar logs with 90 steel pillars. Award-winning interior designer Carlton Varney, president of New York's prestigious Dorothy Draper and Company, created the newly refurbished interiors.

A new fire prevention system with the latest electronic controls, new laundry and storage floors, new offices and conference rooms represent some of the enlargements during 1978.

Guests of The Grand have included a parade of Presidents and merchant princes, U.S. industrialists and internationally known social figures. U.S. Presidents Grover Cleveland, William Howard Taft and Theodore Roosevelt have been guests here. Mrs. Lyndon B. Johnson was honored at a reception at the hotel in 1964. President Gerald Ford spoke at a breakfast meeting in the main dining room.

Mark Twain stayed at Grand Hotel, as did Julius Rosenwald, William Waldorf Astor, Marshall Field, George Pullman, Chauncey Depew, General George Marshall, Jimmy Durante, Lauritz Melchoir and others, both privately registered and openly registered.

The front porch is the longest in the world. It spans the 880-foot long main building.

The five-storied Grand Hotel has more than 261 guest rooms, a spacious main lounge, a 250-foot-long main dining room, the Terrace Room for evening parties and dancing, a cocktail lounge and auditorium for meetings and film showings with 14 additional meeting rooms. Accommodations are available for small conferences of 10 people or large conventions of 1,000.

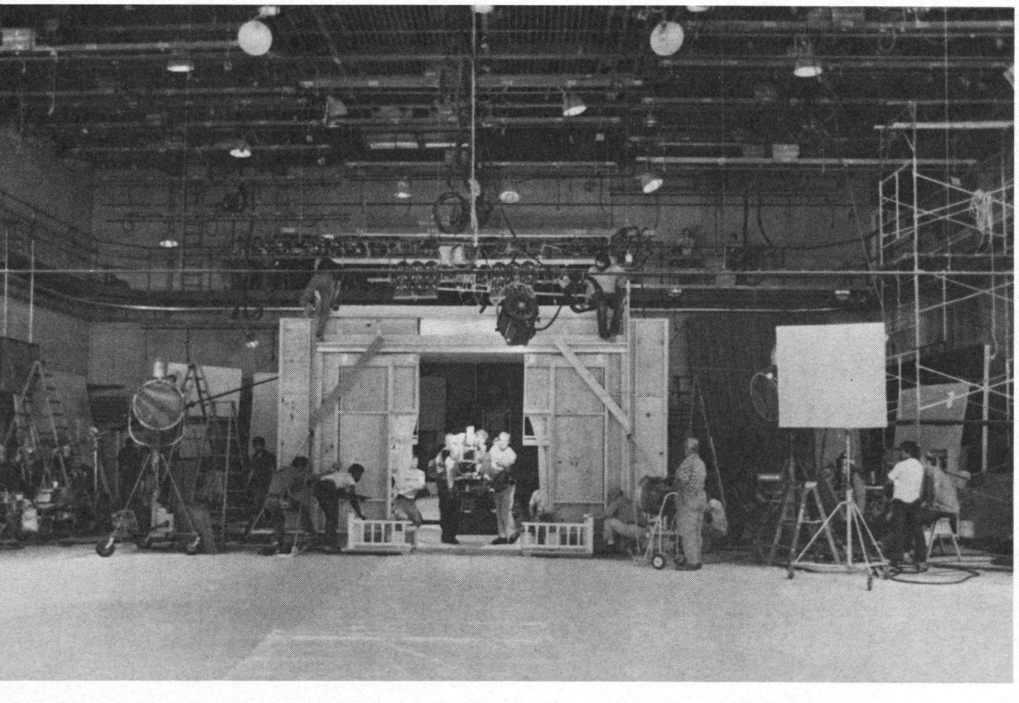
The hotel buildings contain 5,102,432 cubic feet.

During the filming of the new motion picture, SOMEWHERE IN TIME, in May and June, the art director faced a problem. The script required that Grand Hotel be first seen as a bleak, uninhabited place. Expert camera work and some superficial "greying down" of certain rooms accomplished the effect. Through a psychic exploration, the leading character finds hideaway to the pre-season, nearly deserted Grand Hotel. Then through a time warp, a previous life is experienced in the glittering and festive hotel of 1912.

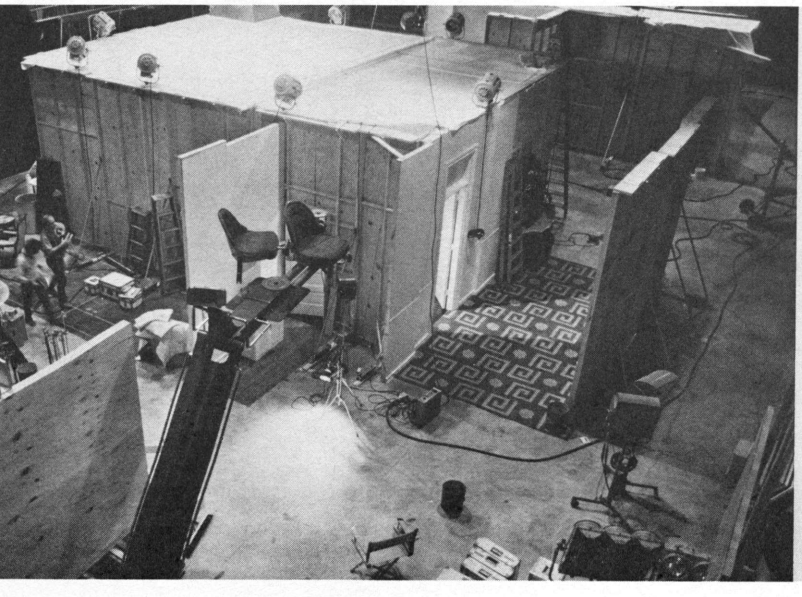
Thousands of flowers bank the way to the main entrance and, from the walkway bordered by brilliant yellow wrought iron railings, a panoramic view of the Straits of Mackinac unfolds.

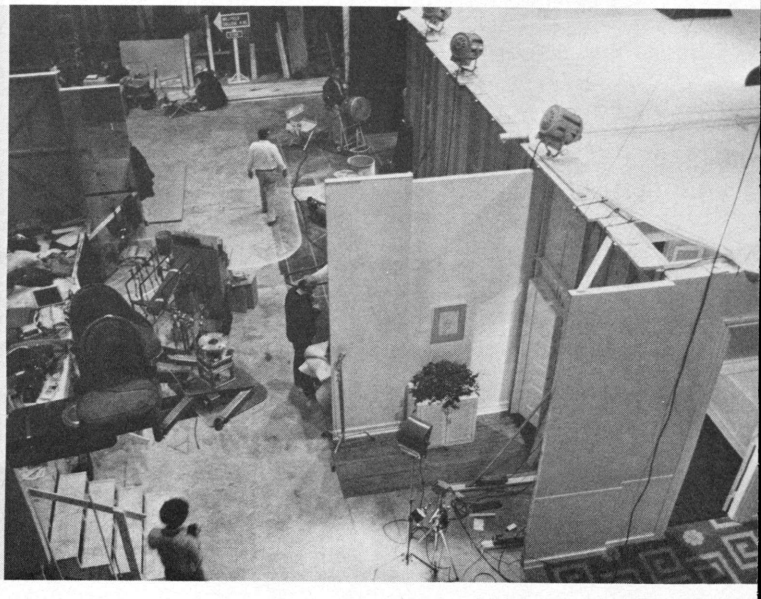
Straight ahead are the grassy slopes with their shaded tables and lounge chairs and the turquoise blue waters of the heated serpentine pool. Adjoining the pool are the sauna and dressing rooms. Beyond this stretches an expansive beach.

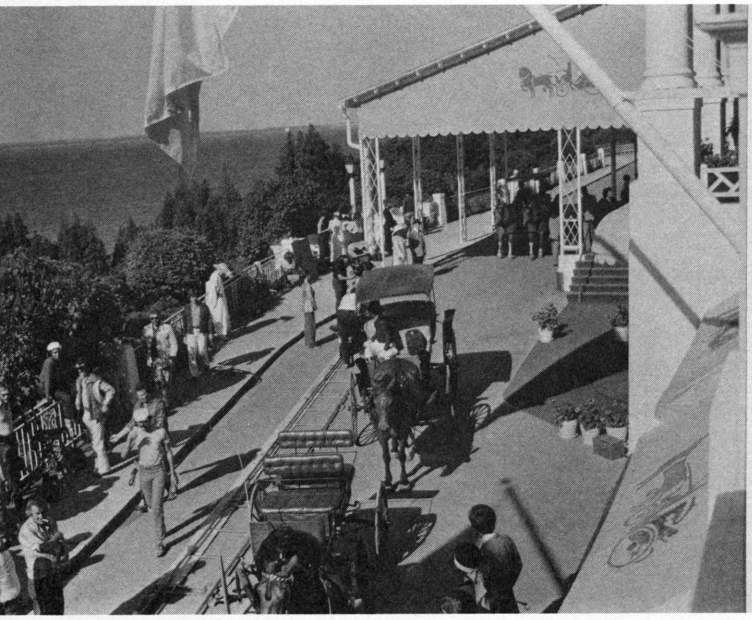
Grand Hotel's golf course reaches to the edge of the thick woods of the State



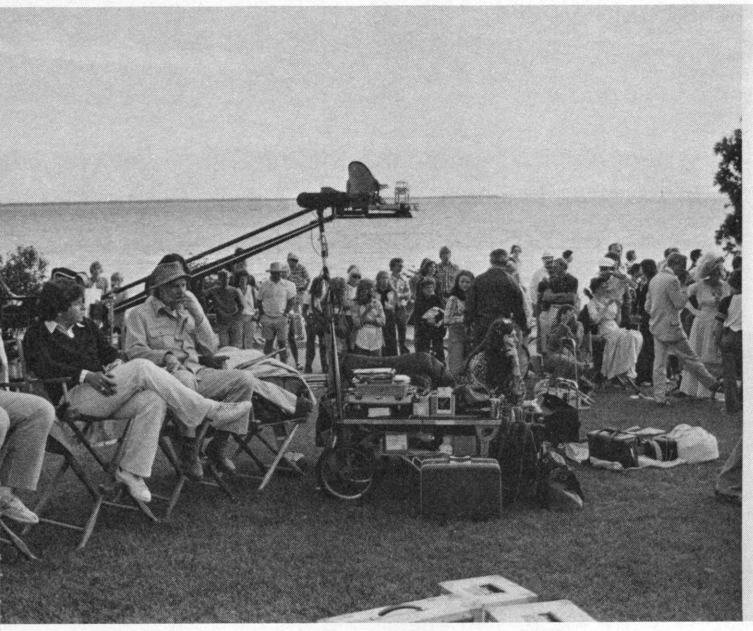
(ABOVE LEFT) One end of the huge sound stage that exists on Mackinac as part of a complete motion picture and television production complex built during the 1950s. (BELOW) Complete rooms built on the stage represented both period and contemporary suites of the lush Grand Hotel. They served conveniently as cover sets to keep the company shooting during inclement weather.







(LEFT) Filming outside the main entrance of the elegant Grand Hotel on Mackinac Island, the largest summer hotel in the world and a triumph of Victorian architecture. Marine vistas predominate because here is where two of the largest of the Great Lakes, Lake Michigan and Lake Huron, are joined. (RIGHT) Filming a scene of Jane Seymour and Christopher Reeve strolling in front of the hotel. (BELOW) The grounds of the hotel were used extensively in filming. The marvelous cooperation of this hostelry, plus the availability of a complete production complex nearby, made it possible to shoot the entire feature on the island.



Park.

Across the way are all-weather tennis courts.

A baseball diamond also is located on the Hotel grounds, and a putting green.

Nearby riding stables offer saddle horses for rent.

The Grand Hotel gardens themselves are remarkable in size and variety. More than 5,000 geraniums line the front porch. Some 6,000 pansies—Coronation Gold, Lake of Thunder and Mt. Blanc—form their own flower beds. White Magic, Cavalier and Pink Sensations make up the 4,200 petunias that bloom along the entrance to the Grand Hotel near a carpet of 2,000 sweet alyssums, 2,000 ageratum, 4,000 cleome, nearly 1,000 marigolds, 200 nicotiana, 150 blue salvia and 250 snapdragons. The flowers in front porch boxes and planters and along the tea gardens down the rolling lawn, are designed to unfold in view as one travels along the grand carriage drive to the Hotel.

Another garden, at the swimming pool is a profusion of 1,200 geraniums, 1,000 ageratum, petunias and other annuals and 100 tuberous-rooted begonias.

The Grand Hotel's main building, with the porch set 100 feet above lake level, contains a bake shop, butcher shop, food storerooms, pantries and a wine cellar, that are all housed in a two-and-one-half story kitchen. Nine walk-in food coolers and 21 large refrigerators are needed to handle the 4,200 meals served each day at The Grand Hotel. Food supplies, on an average day, add up to 2,400 pounds of meat, 75 bushels of fruits and vegetables, 325 pounds of butter, and exotic delicacies of all descriptions.

More than 30,000 yards of carpet cover the floors of the main building, including the longest carpet ever made, a two-block-long section that runs from the east end of the main building to the west end of the lobby.

Grand Hotel's automatic sprinkler system is one of the largest fire protec-

Continued on Page 738

First, a film shot in Heaven

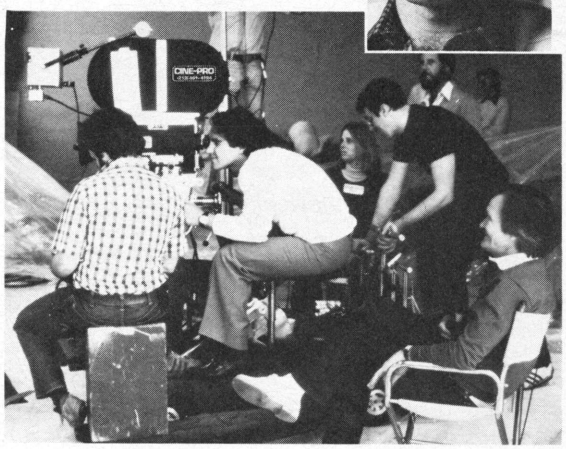
. . . then straight down to Hell

with Cinematographer IRV GOODNOFF

. . and equipment from CINE-PRO

"With today's production costs as they are," says Irv Goodnoff, "it just isn't enough anymore to be creative and technically proficient. One also has to be always aware of the price tag on every minute of production time. A few critical minutes lost can translate to thousands of dollars at the bottom line on a major production. That basic fact of current movie-making is the main reason why I want my equipment to come from Cine-Pro. Their equipment is totally reliable; in my experience, it *always* works as it should, without fail. It's *always* delivered precisely when and where I want it, anywhere in the whole country. They're *always* ready to respond to a sudden, unexpected need, day or night. And if a really 'special' shot requires a piece of equipment that doesn't exist or isn't available, Cine-Pro actually will *create* it in their shop; they've done it for me, so I know for sure. They give the same careful attention and perfect service to a little half-day shoot as they do to a ten-week feature. If I sound enthusiastic, it's because I've learned through hard experience to appreciate their kind of solid, perfectionist professionalism when I find it."

Little more than a month ago, Director of Photography Irv Goodnoff perched on the edge of a cloud in producer-director Chuck Blore's TV version of Heaven, shooting a series of highly unique and daring commercials for a life insurance company. No sooner did he exit the Pearly Gates than he plunged direct to the depths of Hell to lens the diabolical goings-on in Satan's flaming soulcooker, in production of the currently filming feature, *"Evilspeak"*.* The unusual, however, is pretty much routine for Irv Goodnoff. In addition to fourteen outstanding films for theater release, he has filmed many commercials for TV, sufficiently unusual to win *seven* Cleo Awards, one Gold and two Silver Awards at the N.Y. International Film and TV Festival, and the International Broadcasting Award. He's the only graduate of the American Film Institute to have been granted *two* fellowships . . . one in Cinematography, the other in Motion Picture Direction. He also studied the cinematic arts at the N.Y. Institute of Photography and School of Visual Arts. Irv's professional career started as a prop man, working out of Local 52 in New York. From there, he quickly worked his way behind the camera, moved to Hollywood, and currently is Group I eligible for I. A. assignments. Now having reached both the depths of Hell and the heights of Heaven in his fifteen-year professional career, it's fascinating to speculate where he will go from here . . . !



*"Evilspeak" is a Coronet/ESP Production. Executive Producer, Sylvio Tabet. Producer, Eric Weston. Production Manager Alan Green. "Heaven" commercials by Chuck Blore and Don Richman Productions, Inc.

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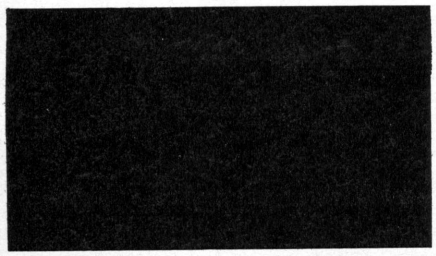

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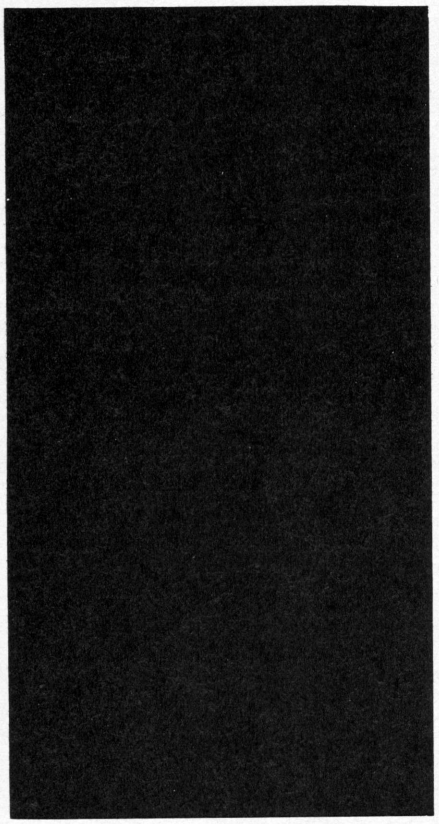

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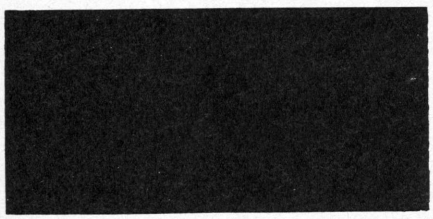

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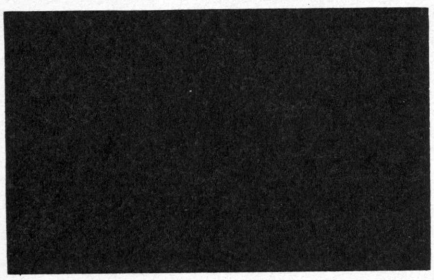

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Continued from Page 669

necessary to make a movie properly.

A compromise on transportation was finally achieved between the studio arbiters and the two governing bodies on the island, the City Council and State Park Commission. Exceptions had been made once before, in 1946, when M-G-M shot exteriors on Mackinac for THIS TIME FOR KEEPS, a marginal musical comedy starring Esther Williams, Jimmy Durante and opera star Lauritz Melchior. Universal would be allowed to bring onto the island four essential trucks, plus a minimum number of cars needed for background in the modern-day scenes, when Richard Collier arrives at the hotel in his Fiat, and a precious few horseless carriages for the 1912 sequences.

The conditions attached to the movement of these authorized vehicles were right out of Jonathan Swift. Any producer less driven by a labor of love than Stephen Deutsch, for whom this was a long-awaited maiden voyage into moviemaking, would have sought an alternative location at the outset of negotiations with the townspeople.

To make the situation all the more unlikely, the Grand Hotel could not accommodate the cast and crew during the necessary months of June and July. It had been long ago booked with conventions and was operating at 98% occupancy until October, when they close for the winter.

Deutsch and Szwarc were about to pack their bags with frustrated dreams when the Inn on Mackinac was suggested as an alternate solution to the housing dilemma. Built by Dr. Frank Buchman's Moral Rearmament (MRA) campaign in 1956, the peak of the Eisenhower era A-bomb panic, the complex and its 32-acre site had served as World Conference Center for the evangelical organization's worldwide anti-Communism crusade.

Ten years later, MRA disappeared to Caux, Switzerland, and the complex had a brief incarnation as a college. In the intervening decade, however, MRA incredibly erected an 800-seat legitimate theatre, a television studio, a recording studio and a fully equipped motion picture soundstage. Aiming to, in the words of a "Historical Synopsis" issued by the Inn, bring "messages of humanistic optimism to people all over the world," the singular feature-length output of the MRA, "THE CROWNING EXPERIENCE," was summarily dismissed from moviehouses after a brief international release in 1960.

Jeannot Szwarc adopts a typical director's gesture to frame a scene with his hands. SOMEWHERE IN TIME marks a radical departure in style for him after his highly successful JAWS 2. (BELOW) Szwarc looks through the viewfinder to check set-up for a scene filmed inside the Mackinac Island library. A native of France, he has worked in Hollywood for many years.

Jeannot Szwarc was ecstatic after examining the potential for making a real film in this amazing complex . . . at that gorgeous hotel . . . on this breathtaking little island. Not only was there a soundstage (still rigged with lights bearing the "MRA" stamp) comparable to the best on any studio lot, but a wardrobe department with complete laundry and dry cleaning facilities, a make-up room with professional salon-style accoutrements for hairdressing, a pre-equipped carpen-

try shop for construction of props and sets, plenty of space to store two and a half 40-foot truckloads of furniture and a two vans of custumes, as well as an editing room ready to be revived so that SOMEWHERE IN TIME could be viewed as a work in progress.

Stephen Deutsch was thrilled to find the two former dormitories of MRA/Mackinac College, where the entire company could be housed for the summer. He exulted with Jeannot over the quality of light at this latitude and shook hands with all the founding fathers of Mackinac Island.

The Grand Hotel's attitude toward the film company was a polite distance at first. They preferred to keep their name out of the picture until they read Richard Matheson's script. Afterward, Daniel P. Musser, president and general manager of the Grand, and his dynamic young vice president, Francis X. Keefe, agreed that SOMEWHERE IN TIME might be the perfect way to "immortalize" this grand hotel.

The Grand's deal with Universal was a handshake—no rental was charged for extensive filming on the premises, a measure of hospitality that never ceased to astonish Stephen Deutsch, who said, "It's incredible. The hotel doesn't need the publicity. They're always full of guests. I guess all we can do to pay them back is try to capture the Grand's elegance on film. It's perfect in just about every way."

To reciprocate such graciousness, the SOMEWHERE IN TIME company behaved themselves as if they had been invited into someone's fabulous home. Every effort was expended to work as inconspicuously as possible while at the hotel, so as not to disturb the paying customers. No bullhorns were used on the set, but the assistant directors somehow always managed to quiet crowds of onlookers at the unaccustomed decibel level of a normal tone of voice.

The crowds numbered into the thousands when the film company worked out on the streets of Mackinac. No motorhome dressing rooms were permitted onto the island (deemed nonessential vehicles in the arrangement with local authorities, as were the "honeywagons" unique to a movie set with their make-up rooms and bathroom facilities, usually a good idea to have around on remote outdoor locations), so Reeve, Jane Seymour and Christopher Plummer had nowhere to hide from autograph seekers. Every day between long camera set-ups, Chris Reeve would go over to make his fans happy, signing "Superman" pictures and scraps of paper, smiling for snapshots.

When the production moved onto the soundstages at the Inn on Mackinac or into the old MRA Theatre (where Jane Seymour's starring vehicle as Elise McKenna, "Wisdom of the Heart," was filmed in both rehearsal and actual performance), there was little evidence of a movie in the making on the island. Universal's four big trucks were discreetly hidden from view behind the old Mission House on the Inn's property, and fans seeking "Superman" were at a loss for a glimpse of their hero. Chris was invariably involved with his new identity as Richard Collier on the closed-set enforced while shooting on the stages.

To establish the periods 1972, 1979 and 1912 at points along the storyline, the Grand's immense lobby had to be completely redone. As soon as the modern day sequences were shot, the hotel's contemporary decor reverted to the opulence of 1912, a metamorphosis effected often in the wee hours of the morning, when sleeping guests would not be disturbed by painters, drapers, electricians, and men moving furniture.

The white columns and woodwork in the lobby were repainted "Hollywood Oak," a process that took eight days and

Continued on Page 742

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PERISCOPE LENS SYSTEMS

A comparison of four exotic camera systems that have proved to be especially effective for moving fluidly through miniature settings

By MILTON LAIKIN

Recently there has been increased interest in periscope optical systems in cinematography for photographing models. Due to rising construction costs, full-scale sets are very expensive. On several of the recent space movies, it was found to be economical to build miniature sets. Such sets are built with great detail. Then with a periscope lens the cinematographer may get into this model for a very realistic scene.

A number of years ago, Paul Kenworthy developed a periscope or Snorkel camera system as he called it. His objective was to get the camera out of the way of the actors. This was accomplished with an optical relay system which replaced the normal camera lens. The relay was a long vertical tube on the front of which was a mirror to deviate the line of sight 90 degrees. Since the camera was out of the way, he was able to get in close to actors. Likewise the system found use for architectural models.

Several people have built up such periscopes with stock optics. FIGURE 1 shows a block diagram of such a system. E is an Erfle eyepiece available from many optical supply houses. G and H are two photographic lenses placed front to front. The iris of one is then left wide open while the other is used for iris control. Generally the lenses are arranged so as to have collimated light between G and H. The effective focal length of the system then is $\frac{EH}{G}$, where E, H, and G are the respective effective focal lengths of the components.

Since the mirror is placed at the entrance pupil location, its small size usually surprises most cinematographers. With the mirror in place, one may get very close to eye level. Without the mirror, the system acts like a borescope.

Due to the length of the system it is generally desirable to focus by keeping the distance lens E to film plane constant and moving the G, H combination. If H is larger than G, this combination will move toward the film as one focuses to close objects.

Another system which is sometimes used is to replace lens E with an ordinary photographic lens P, and a field lens. This scheme is shown in FIGURE 2. The field lens is generally a bi-convex lens and placed very close to the intermediate image of P. This field lens has very little effect on system focal length, given by $\frac{PH}{G}$.

Continued on Page 733

PERISCOPE USING AN EYEPIECE FRONT END

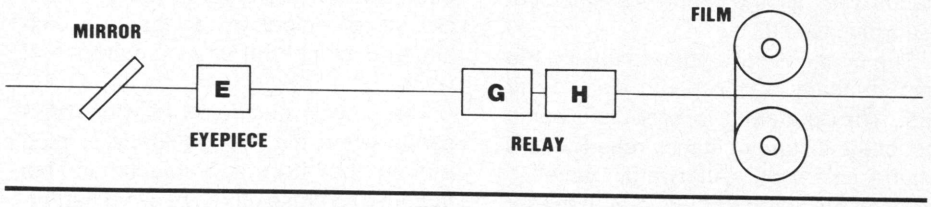
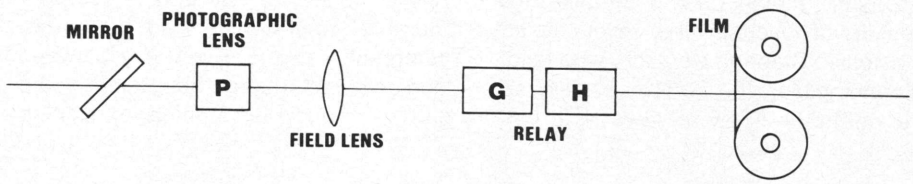
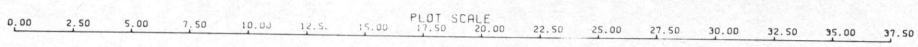


FIGURE 1

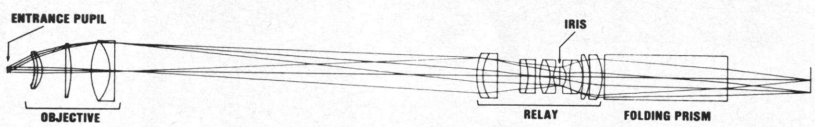
FIGURE 2

PERISCOPE USING A PHOTOGRAPHIC OBJECTIVE AS A FRONT END





OPTICAL SCHEMATIC, RAY PATH

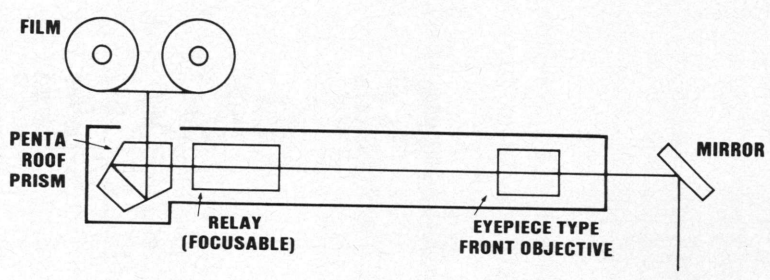


PERISCOPE LENS

FIGURE 3

FIGURE 4

FOLDED PERISCOPE SYSTEM WITH ERECT IMAGE



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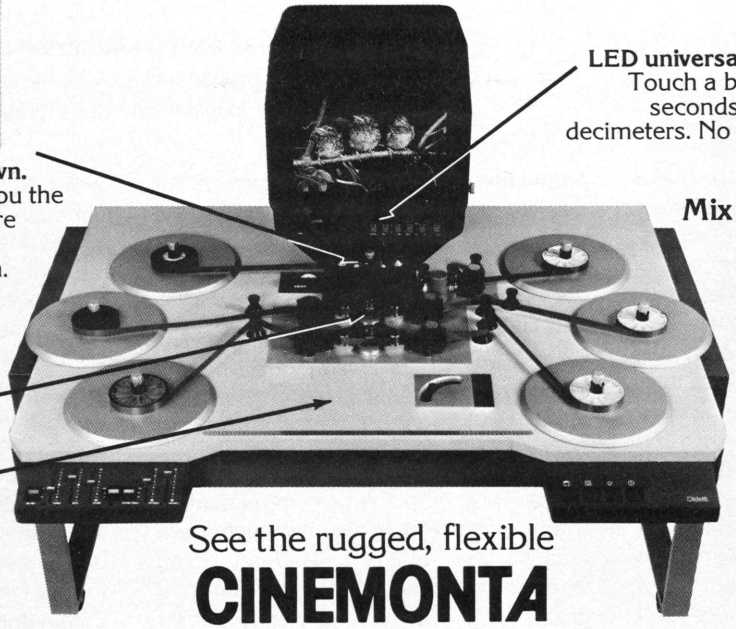

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THE DIRECTORS VIEWFINDER AS A COMMUNICATIONS TOOL

A director talks about the instrument that he finds invaluable in furthering his relationships with the cinematographers with whom he works and in planning and choreographing action and camera on the set

By ALAN J. LEVI

It often surprises me that we who make our living in the field of communications frequently fail to communicate well between ourselves. The making of any film—for television or theater—is a collective effort which usually involves well over a hundred professionals, all hopefully striving toward one goal—a successful production. How accurately and efficiently we communicate with each other often determines the extent of that production's success.

Directing for television especially, invariably adds the factor of an overly-tight shooting schedule to the problems of producing an aesthetically successful picture. What with continual rising production costs, efficiency in communication plays an ever increasing role in shooting the picture within studio-dictated budgets, yet we must deliver to the producers a picture which will contribute positively to the ever-present television rating race.

Once the script goes before the cameras, I've found the relationship between the Director and the Cinematographer generally sets the pace for the picture—both in aesthetic approach and speed of execution. Many of the new tools we have to work with have been developed to aid in that execution; flexible lightweight cameras, highly portable lights and recorders, wireless microphones and the many new developments in compact equipment trucks and vans.

However, before this equipment can be put to use, the Director must plan the filming of his picture, keeping in mind the myriad factors which will come to bear upon the production. He must not only strive for quality and realistic dramatic interpretation, but also maintain the production schedule as well: Since the vast majority of sequences in most television films are now photographed on location rather than on studio sets, this new equipment has to be used to its fullest value, in order to contribute positively toward the successful filming of the project.

The greatest tool for me as a Director in choreographing the actors and camera angles before actual production begins, has always been the Director's Viewfinder. The viewfinder has also become, I feel, one of the greatest aids in my successful relationship with the Cinematographers with whom I work. First, in preproduction, the viewfinder allows me to communicate accurately with the Art Directors and Set Decorators precisely how much of the location will most probably be photographed. It allows me to choreograph the actors' movements and camera angles creatively, mentally editing the scenes while planning the number of setups needed or possible within the shooting schedule. Then, having planned how my mind's eye sees the scene photographically, communication with the cameraman can be much more creative and efficient. Understanding what I want, gives the cameraman a greater opportunity for input. Together we can arrive at the most aesthetically creative and economical way for him to photograph the scene in order for us to attain what we both are striving for.

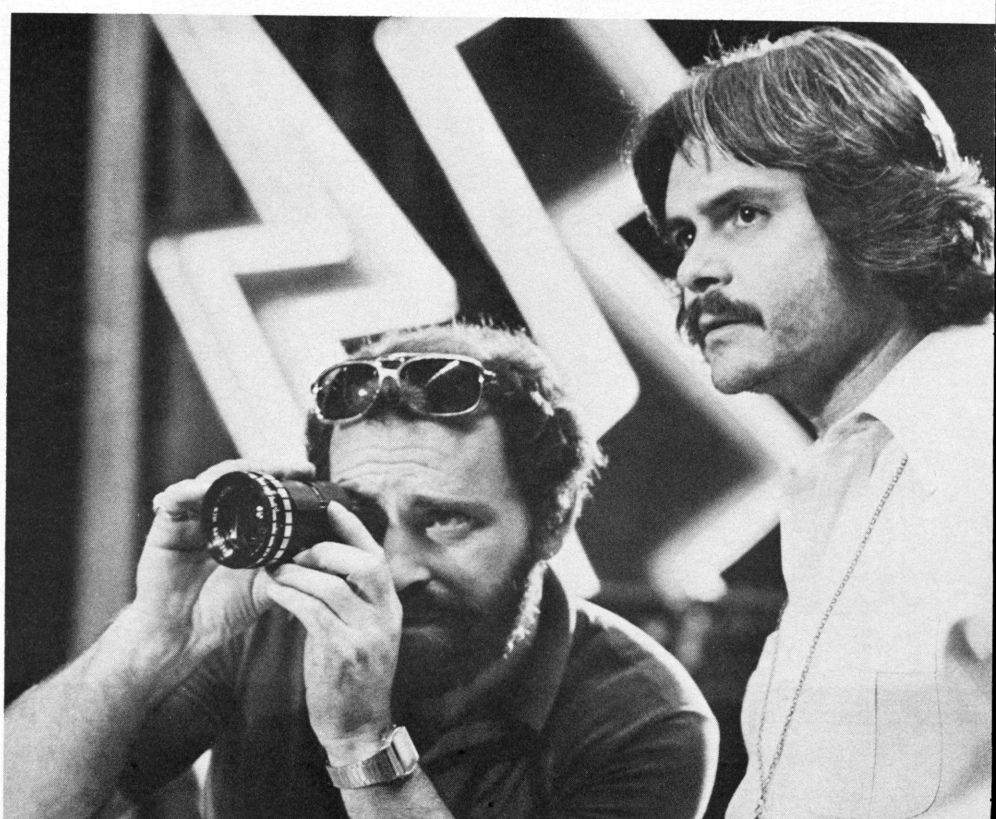
Until now, the Director's Viewfinders have lagged behind the advancements made in new cameras and lenses. On location, the old Model IIIB 6-to-1 zoom finder falls short of being able to give the Director a look at what can be done with the new lenses. Many times a zoom from 25mm to 250mm is needed in an economically planned TV show. Until the camera was set up on location, it was often impossible to ascertain exactly which shots were practical.

Finally, the new Alan Gordon Enterprises Mark IV 10-to-1 Director's Zoom Viewfinder makes it possible for a Director to see exactly what he can get before the cast and crew arrive on location. What an absolute pleasure that is!

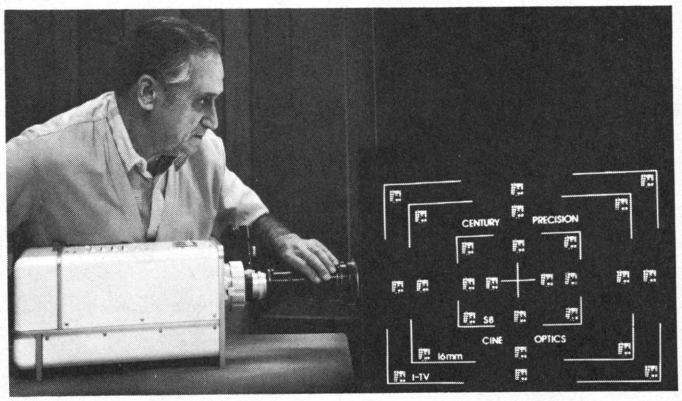
I have always depended greatly on the old Model IIIB viewfinder, but now I depend even more heavily on the new 10-to-1 model. The flexibility and accuracy of Gordon's new Viewfinder parallels that of the new production equipment—finally a full 10-to-1 zoom finder for the Director (25mm to 250mm in the 35mm format, 12mm to 120mm in the 16mm format, and 50mm to 500mm in the anamorphic format) that reads the accurate focal length of the lens at any setting . . . directly.

I've found that on the recent shows such as THE IMMIGRANTS at Universal and THE LEGEND OF JOHN HAMMER at Columbia, I've been able to plan the productions more creatively, in more detail, and more efficiently. Most important, because of this planning, I have communicated better with my fellow filmmakers to the point where we can collectively make finer motion pictures. After all, that is the point, isn't it? ■

Director Alan J. Levi discusses camera angle with camera operator Bill Gereghty. Levi claims that the Gordon Enterprises Mark IV 10-to-1 Director's Zoom Viewfinder, which he is shown using, far exceeds the capabilities of previous models and helps him to arrive at the most aesthetically creative and economical way to shoot a scene.



HOW SHARP IS SHARP?



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THE WINTER OLYMPICS AS BACKGROUND FOR K2 SKI FILMS

The challenge was to not duplicate the television coverage, but to produce an Olympics film that would deal with skiing technology

By CHUCK McGAHAN

When K2 was designated the official ski of the 1980 Olympic Winter Games, it provided the company with valuable promotional opportunities. Although K2 is the largest manufacturer of skis in the United States and is well-known in the specialized ski world, the general public did not have high awareness of the company or its products. The Olympics offered an opportunity to help change that.

But taking advantage of the situation proved to be a real problem.

Although K2 had been associated with several ski films throughout its 15-year manufacturing history, its involvement had been limited to distribution of prints. Ownership and rights to additional usage rested with the producers. It would be difficult if not impossible for the company to take advantage of its unique Olympic marketing position.

By mid-1978, K2 and its communication design consultants, Heckler Associates of Seattle, decided to move directly into the production of ski films, and to retain ownership of all new film materials. The search began for a film producer who was experienced in shooting ski action, who had the creative skills necessary to show the skis and racers to best advantage, and who could assist the company in the complex negotiations and post-production work necessary to get the best use out of the film that was shot.

The producer selected was the Charles East Company of Seattle. Chuck East is an experienced skier and former ski instructor who now heads his own motion picture production company.

Cost-efficiencies of the project became clear almost immediately. For about the same amount of money that would be required to purchase a minimal commercial buy from ABC during the Olympics, K2 would be able to produce and distribute, for television and theatrical release, three separate half-hour films. In addition, it would be able to provide the best action footage of K2 skis to other commercial sponsors using national television, produce its own commercials for cooperative use with its dealers, and give its engineering department an unmatchable visual record of how racing skis perform under the most demanding conditions.

East and his crew traveled to six World Cup sites in Europe and the United States during the winter of 1978-79, exposing approximately 70,000 feet of Eastman color negative II film 7247 (tungsten).

Two documentary features came out of that winter's work, and each has been distributed to hundreds of television stations, and to a total audience of millions of viewers. In addition, prints of both films are used by ski clubs and ski teams around the world.

Specialized work like this required a production team that understood commercial cinematography as well as skiing. East began with people whom he knew and had worked with, and formed a nucleus of a team that would be together for two years. Many times there would be as many as five cameras operating at distances up to a mile from each other. Split-second decisions would have to be made, and the crew members had to recognize opportunities instantly and take advantage of them. There would be significant technical challenges, such as recognizing rapid, radical changes in exposure values caused by the sun moving behind or out of cloud cover, or skiers racing from bright snowfields into shadows.

One reason the 16mm color negative film format was chosen is that it provides tremendous mobility and latitude for handling the wide range of conditions to be faced. "There were times when we had to decide in seconds whether to set the cameras for a fast enough shutter speed to capture the action as skiers raced by, or to maintain the depth of field necessary for showing a field of skiers," said East. "Then there were those situations where the action quickly moved from bright sunlight glaring on white snow to clouds and dark shadows or fast-falling dusk. For example, we were able to shoot skiers moving at top speeds into shadows, while still holding the bright white snow sparkling in the sunshine behind them. The film held the contrast even when we had to overexpose by as much as three f-stops."

The number of cameras and size of the crew were dictated by the scope of each event. Usually, the production team consisted of 12 to 15 people operating as many as eight cameras, made up of a mix of Arriflex SRs, CP16s and one PhotoSonics Action Master high speed camera. The Action Master can be operated at 500 frames per second; however, best results were obtained at 200 fps, and rarely was footage shot at more than 300 fps. All cameras used Angenieux lenses, including 12-120mm and 12-240mm zoom lens, and several telephoto and wide-angle fixed-focal-length lenses. All were used interchangeably on the Arri and CP cameras.

Double-system sound was recorded using Nagra TV recorders with selected cameras. Natural sound added color and substance to the documentary films. Interview situations were kept to a minimum since there would be language barriers with the broad international distribution planned by K2.

East's crew operated the high-speed cameras without the number 85 filter usually employed to properly color balance the film for daylight exposure. This provided at least an extra half-stop of exposure and made it easier to lock-in on the action with critically sharp focus. In these instances, the lab, Alpha-Cine, in Seattle, was to color-correct the film and perfectly match it with filtered footage.

Extreme care of the equipment enhanced results. Working with rented cameras, which were presumably carefully tested by the suppliers, the cameramen rechecked all of the gear thoroughly before every shoot. This included leaving cameras in freezers overnight. If they didn't start up right away the next day, they were exchanged for gear that would. Sufficient extra equipment was on hand or easily accessible so that anything could be replaced on short notice. Overall, all of the equipment stood up to the challenges very well. Very little footage was lost because of an equipment malfunction, and there were no film problems caused by the extreme environments that the team worked in. The film never got brittle, even on the coldest days.

"Scripts were to be written after the footage was assembled. So producing the two films was a little like buying so much lumber and then trying to build a house," East explained. "That was essentially our situation when we began post-production. We had a lot of pretty pictures, but we were backing our way into a concept. And there was still a great deal of organizational work to do."

Film editor Ron Rolla developed an efficient system for indexing the film. Once the film was processed, Chuck East and Gordon Bowker, of Heckler Associates, reviewed all of the dailies with a tape recorder at their side. Standard information for each shot was recorded. This included the roll and edge numbers, the type of event, the place, the people involved (coaches, racers, and

Continued overleaf

(LEFT) Near the finish line of the venue for downhill skiing events at Lake Placid, New York, site of the 1980 Winter Olympic Games. (RIGHT) Cameraman Dain Rodwell lines up a shot. Specialized work like this requires a production team that understands commercial cinematography as well as skiing. The number of cameras and the size of the crew were dictated by the scope of each event. Usually the production team consisted of 12 to 15 people operating as many as eight cameras.

(LEFT) Chuck East, producer of the films, is an experienced skier and former ski instructor who now heads his own motion picture production organization, Charles East Company of Seattle. He began with people he knew and had worked with, and formed the nucleus of a team that would be together for two years. (RIGHT) Dave Altschul sets up to shoot a scene. The array of cameras used in filming the Olympics included Arriflex SRs, CP16s and one Photosonics Action Master high-speed camera.

(LEFT) Getting ready to film action on the slopes. All cameras used Angenieux lenses, including 12mm-120mm and 12mm-240mm zooms, plus several telephoto and wide-angle fixed-focal-length lenses. (RIGHT) The jolly crew. (Back row, left to right:) Chuck East, Ron Rolla, Dave Altschul, Dain Rodwell, Woody Mueller. (Front row:) Tex East, Charlie Brown, Chuck Fey.

their numbers), whether it was normal or slow-motion film, plus standard descriptions of the action.

Rolla used a home computer to create an automated index. As he listened to the audiotape, he keyed the appropriate information into the computer memory. Bowker and East developed concepts for the first two films while viewing the workprints and recording the indexed information. Later, the computer index was used to call up scenes that fit the script. This index also proved invaluable in the selection of footage for other purposes.

Chuck East believes that the editor's role in this project was more important than on most film projects he has handled. In many instances, there was too much good footage of certain subjects. Rolla would drastically edit it, and still have more frames than could be included. His judgment and skill were essential when it came to making the final cuts.

At other times, a scene had to be extended in order to carry a mood, and there wasn't enough of that particular footage to work with. Again, Rolla's editorial and conceptual input was invaluable . . . as was his knowledge of 7247. "It made life much easier in the lab," Chuck East explains.

The 16mm color negative film format proved to be very flexible for distribution purposes. Previously, most of East's experience had been with 35mm color negative film. The smaller film format, however, was an obvious choice for this assignment because of the need to work with more compact camera equipment. Advancements in laboratory technology, especially techniques and materials for making color-dupe intermediates, resulted in an ability to produce very high-quality projection prints both in 16mm and 35mm formats.

Some of the footage was also used to produce television commercials. In these instances, East and Rolla selected footage on the workprints, and sent the original negative to Image Transform in Los Angeles. They made film-to-tape transfers using the Rank Cintel flying spot scanner. This allowed the duplication of videotape which had a first-generation 35mm film look.

During the process of producing the two pre-Olympic films, a critique of the work of each photographer was developed. This helped prepare the group for the challenge of producing a third feature documentary based on the Olympic Games.

By the time the Olympics arrived, the entire team was technically stronger than when they had started, and had honed their instinctive abilities for working together.

But they still had their work cut out for them. East and his client didn't want to duplicate the television coverage of the games; they didn't want to produce a documentary about the Winter Olympics; and didn't want to produce a blatant commercial for K2.

The Olympics film would deal with technique and technology. K2 wanted to show how technique and technology interface and influence each other. This was accomplished by illustrating how K2 racing skis responded to different situations on the course. One sequence, for example, shows a skier moving through an icy, choppy stretch onto soft snow, and finally over a difficult bump. That says it all. The action sells the skis. No words are needed.

Except for a brief introduction, the Olympics film has no narrative, no on-location sound. Instead, East selected classical music backgrounds that helped capture the feeling he wanted to convey. By utilizing works of Stravinsky, Vivaldi, Haydn and Mozart, a bright, joyful, yet serious feeling was created.

"It worked because this is a story about athletic endeavor and the beauty of movement," said Bowker. "We took the Olympic ritual and the notion of competition and put them into a slightly different context, showing that perhaps the most meaningful moments in sports are not the wins and losses but the excitement of watching someone in action who is very good at what he or she does. We wanted the film to emphasize craft as the true reward for those who ski.

"We were also striving for much more than a film documenting acrobatics on skis. The illustration of a skier's moves, mental attitude and how technique actually plays a role in an individual's performance is the thread that ties everything together.

"I approached this assignment on a fairly intuitive basis," East says. "I was determined to produce an information-oriented motion picture that provides skiers with beautiful illustrations—how a turn is made under a variety of conditions—that racing coaches, for example, could refer to as part of their instruction."

The assignment, and the approach, was different from that of ABC Sports. It had to be good enough for such diverse audiences as moviegoers, ski clubs, and coaches who all want to use it for instruction.

Knowing how many competitors were involved, and what he wanted to cover allowed East to estimate film usage in a very straightforward manner. Planning included knowing right down to the time each camera would be rolling before the skier came into view and how much film would be exposed for tailouts on each shot. On that basis, East estimated using some 50,000 feet of 16mm color negative film and wound up close to that projection.

"It was important to consider an athlete's perception of time and motion in film like this," East explained. "It is very different from ours. Their abilities let them transcend normal perceptions of time. To them, every moment is an entity in itself and the high-speed footage really helps to define that. Racers win by existing for each moment as completely as possible. We tried to show this by using the high-speed footage and contrasting it with the same action shot at 24 fps.

"Also, we found that the racers' actions played counterpoint to the music, and by locking down the camera on a combination of slalom gates, the poles became the musical notes and the racers became the music. The effect was magical.

"At the end of the races, we tried to capture moods of people realizing that it was all over, and their reaction to that finality. There are shots of people hugging each other, tight shots of the faces of medal winners and the expressions of their coaches. Some spectators are laughing, others crying, some just shaking their heads."

The last segment of the film was exposed on monochromatic blue at very high speed. There is just a hint of movement as our story takes us back to that other time when it is no longer the Olympics. They are over. It's "business as usual" in Lake Placid. The barren flagpoles are testimony to that fact. So, too, are the vacant speed skating oval outside the high school and the papers blowing in the streets once clogged with people from around the world.

Chuck East and members of his crew visited Lake Placid for 10 days in November, 1979, more than two months before the competition began. This allowed them to carefully chart camera positions and plan other logistics. Proper planning is the key to smooth production and this is especially true in a fast-moving event of this type where there is no control over any of the variables, including weather.

Part of the planning included matching the skills and temperament of individual photographers to specific assignments. For example, East wanted the most experienced photographers operating the Photo Sonics camera. He always used operators who were familiar with the equipment and who could follow focus under the most tension-filled conditions.

Once competition began, the crew met every evening to review assignments for the next day's events. They charted and

Continued on Page 741

PROCESSING 500,000 FEET OF FILM FOR THE WINTER OLYMPICS

Looking back at what seemed like a superhuman effort at the time, but a fine example of what dedication, skill and efficiency can do

LAKE PLACID, N.Y.—Months from now, the television film crews that made it their base of operations for 12 memorable days in February may not recognize the place. They knew it as the Olympic Broadcast Center where nearly a half-million feet of motion pictures chronicling the events of the XIII Olympic Winter Games were processed, edited and dispatched to many corners of the globe.

The building was headquarters for some 150 ENG and 250 film crews working for either ABC, a U.S. television station, a foreign broadcast company, or a documentary producer. Foreign TV film crews came from Moscow, London, Taiwan, Tokyo, Paris and many other cities.

Today, workers are getting the 60,000-square-foot structure ready as the public works garage it was designed to be once the Games were over. Yet, the concrete and sheet metal structure will be remembered by many for what it was at a time when the eyes of the world were focused on this small, upstate New York community.

School buses and salt spreaders will be housed in what had been ABC Sports' elaborate production facility that occupied nearly one-third of the total layout. The rest of the space, once occupied by foreign and domestic news organizations, will be used as administrative offices by the Lake Placid Central School District and Town of North Elba.

Jack LaDuke, director of audiovisual services for the Lake Placid Olympic Organizing Committee (LPOOC), which provided free processing of Eastman Ektachrome video news film for accredited cinematographers, said the operation went flawlessly. "The feedback from the media has been excellent," LaDuke says.

LPOOC had two film crews working throughout the Games. One crew produced a daily 20-minute film summary. After processing, the film was duplicated and made available to all broadcasters. The second crew produced footage for an official 30-minute documentary which will be distributed this summer.

The documentary crew, like many others covering the Games, used 16mm color negative film. Their film was shipped to DuArt Labs in New York daily, and workprints were returned the next day. While the estimated half-a-million feet of Eastman Ektachrome video news film that ran through the Broadcast Center lab doubled the expectations of LPOOC, it only represented about half of the film exposed at the Games, LaDuke estimates.

The Broadcast Center lab was operated by the committee with technical assistance from Kodak, the official photographic consultant for the Games. Kodak's motion picture and audiovisual markets division provided sales and engineering representatives to monitor lab operations and provide technical assistance to cinematographers.

A similar service was offered during the 1976 Winter Olympics in Innsbruck, Austria, but differences in time zones this

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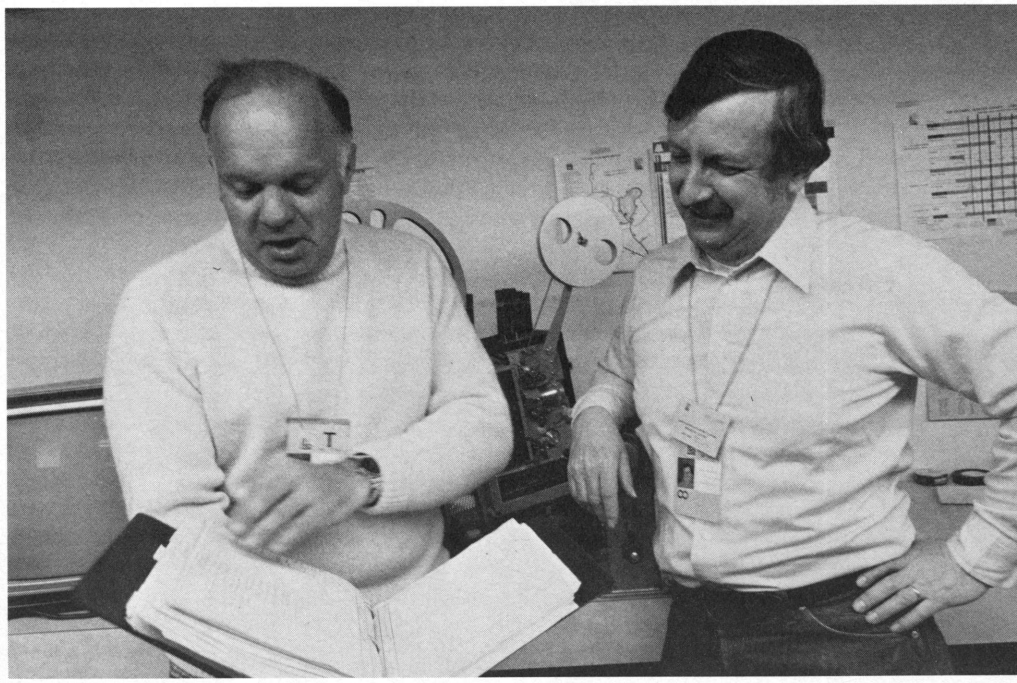
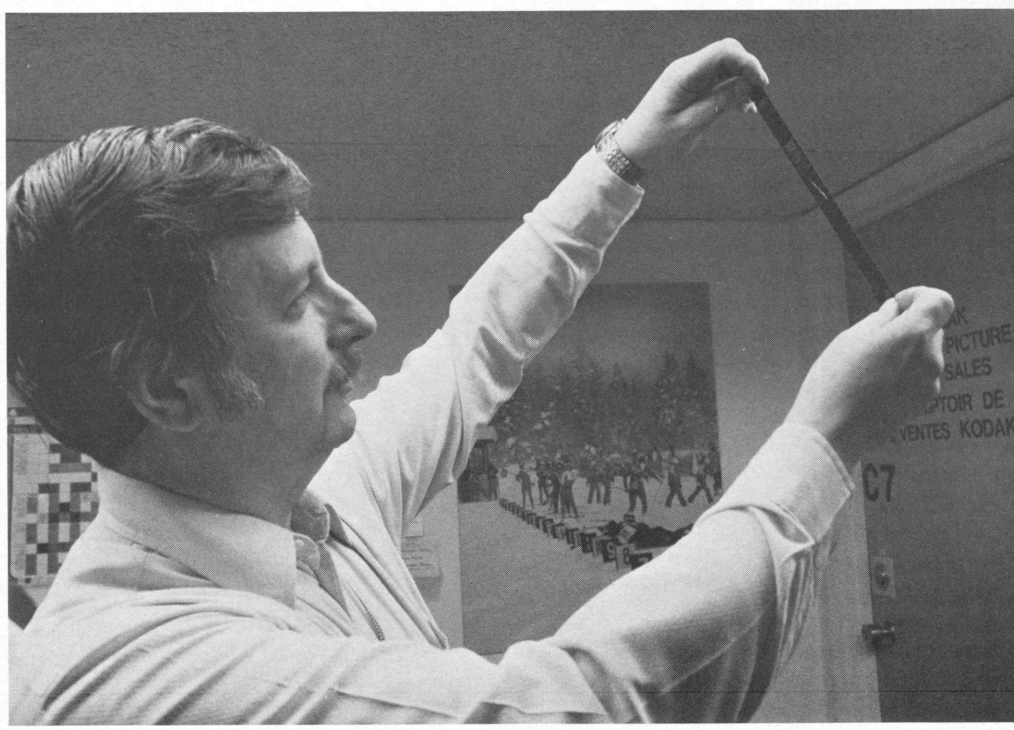


Jim DeWitt (left), Kodak's coordinator of motion picture services at the Olympic Winter Games, meets with Kodak sales and engineering representative Art Florack at the Olympic Broadcast Center. The two were among the number of Kodak representatives on hand at all times to provide the LPOOC with technical assistance. (BELOW) Art Florack checks a film control strip.



FILMING THE IMPOSSIBLE

By JERRY CHIAPETTA
"SPORTS AFIELD" Host/Production Supervisor

Staggering logistics: a total of 195 different filmed TV stories of approximately seven minutes each, completed within a six-month period

Produce 65 half-hour television outdoor programs in just six months! It can't be done.

But it was done, and done on time. In doing so, some sort of Guinness World Record in motion picture production must have been set!

To make matters more difficult, those 65 TV shows involved seven different hosts with locations scattered from the Atlantic to the Pacific and from Florida to Canada.

Each program of 22 minutes was to contain three different story topics or segments. That meant we had to produce a grand total of 195 different filmed stories of approximately seven minutes each and balance them in content into the 65 half-hours!

One other production problem piled on top of that happy chore was that we also had to make numerous outdoor-oriented TV commercial spots for the folks who were paying the bills for all of this—our sponsors.

We had still another complication in that our outdoor segments were all location shoots and involved non-professional performers—real outdoors people doing real things. The topics covered all sorts of fishing, nature and wildlife, personality profiles and action outdoor sports like soaring, flying, and airboat racing. It all had to be honest.

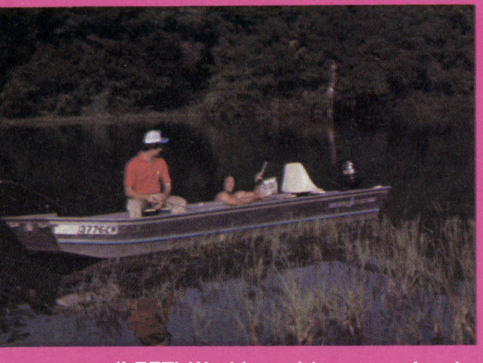
Glen Lau Productions of Ocala, Fla., began The OUTDOORSMAN Series and a second program, SPORTS AFIELD, after considerable research in widespread U.S. cities.

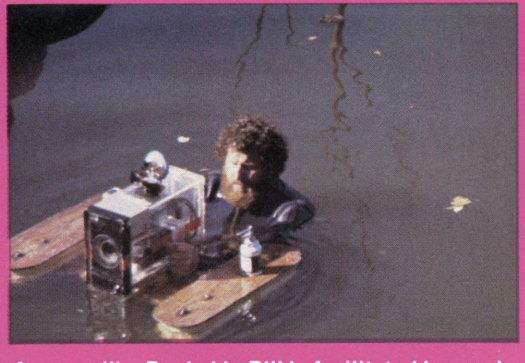
Focus groups of sportsmen were asked what sort of outdoor TV show they would watch. It was a project for Anheuser-Busch beer and Mercury Outboards who wanted a new outdoor show to sponsor. That lead to The OUTDOORSMAN Series divided into four geographic, regional programs—"Eastern Outdoorsman," "Midwest Outdoorsman," "Southern Outdoorsman" and "Western Outdoorsman."

We also learned that a general-interest, national program with variety topics would also be welcomed on TV. That became SPORTS AFIELD, a show with the same name as the venerable outdoor magazine. The OUTDOORSMAN regional shows were all fishing and water-oriented in nature with very strong how-to-do-it themes.

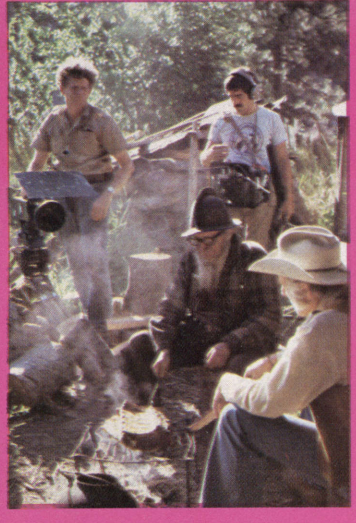
SPORTS AFIELD featured a variety of

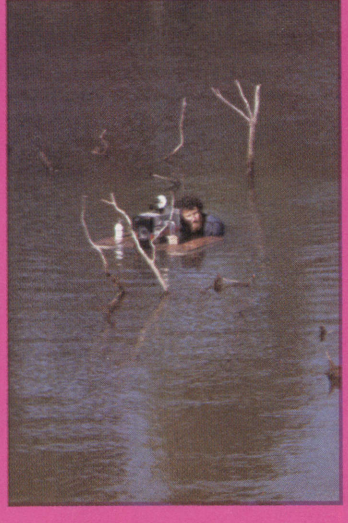
(LEFT) Production people like Skip Comstock, hiding in the water, must also know how to avoid poisonous snakes and alligators. (CENTER) Producer-director Glen Lau with Milliken Underwater camera on float to give water-level view of action. Note handy spray can of compressed air necessary to keep lens plate cover clean after fish leaps and water splashes. (RIGHT) On location with a backwoods character, Buckskin Bill.

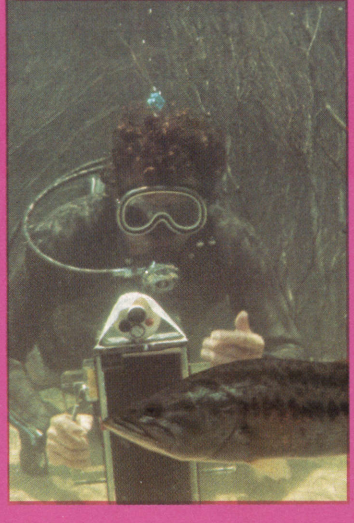


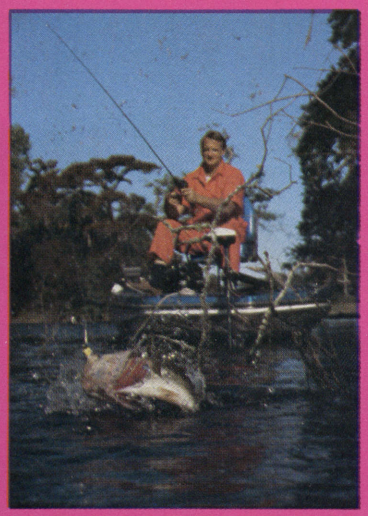


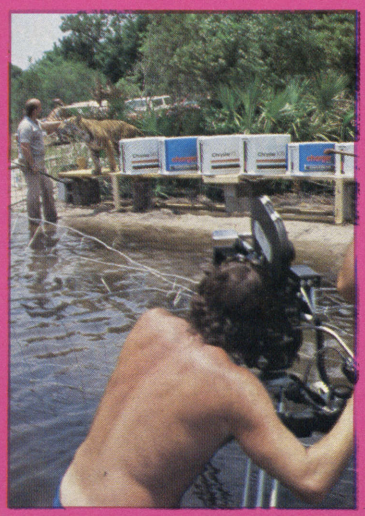
(LEFT) Working with non-professional performers like Buckskin Bill is facilitated by production people who know how to move quickly, quietly and maintain a low profile. Crew members traveled several days by raft down the River of No Return to reach this recluse, who agreed to be filmed with SPORTS AFIELD Host Grits Gresham. (CENTER) Producer-director Glen Lau maneuvers Milliken Underwater camera on float. (RIGHT) Lau tapes Sekonic light meter to his Milliken camera so he can adjust for turbidity as he follows the "star"—a black bass.

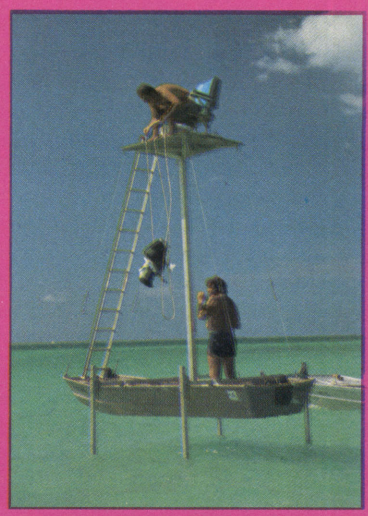




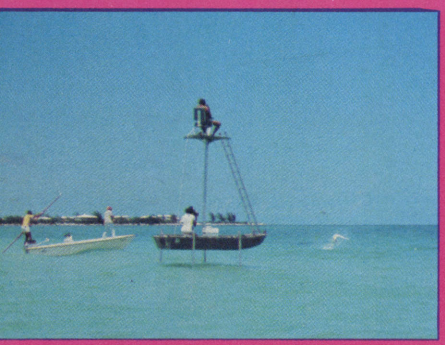








(LEFT) Cameras on floats and cameramen who aren't afraid to get into the drink produce action shots like this one from a feature on how to catch bass. (CENTER) Glen Lau's experience as an outdoor guide and one-time trapper pays off in the work that is often done with wild animals. In this shot, Lau was producing a series of TV spots for Chrysler Marine using tigers. (RIGHT) The Tower Boat is built with its own stilts, which are driven to the bottom for rock-solid stability. Camera is hoisted up to operator on a rope.



(LEFT) The Tower Boat pays off with tarpon shot. Two cameramen can get both high and water-level angles, once in position. (CENTER) SANTA BASS was part of a commercial shoot. Glen Lau Productions specializes in working with fish and water-oriented productions. (RIGHT) While filming a story called "Sharks in the Shallows" for SPORTS AFIELD, Jerry Chaippetta moves down in the anglers' boat for closeups of the shark landing.

outdoor subjects—from butterflies to bugling elk, from deer in winter to diving in dangerous caves. The show also utilized Grits Gresham, Homer Circle and this writer as hosts. The OUTDOORSMAN had Jim Bashline (Eastern), Al Lindner (Midwest), Rick Clunn (Southern) and John Fabian (Western) as hosts for their respective regional shows.

This network of people scattered across the country was held together by Glen Lau, producer-director, based in Florida. Glen was no stranger to quality film work and had a national reputation for earlier work on a documentary on the life-cycle of the Black Bass and as producer of THE FISHERMAN TV Series which ran for three years nationwide.

Lau had also produced award-winning commercials and TV films for numerous companies and organizations, including one with actor Robert Redford for the National Wildlife Federation.

Another project was a series of TV spots for Chrysler Marine involving Tigers, the symbol for their line of outboards.

Earlier work had prepared Glen for the monumental task ahead. Preparation and planning were the keys to success.

Glen lined up some of the country's leading outdoor film-makers and formed what we called mobile "in house" crews who were moved around the nation like military troops.

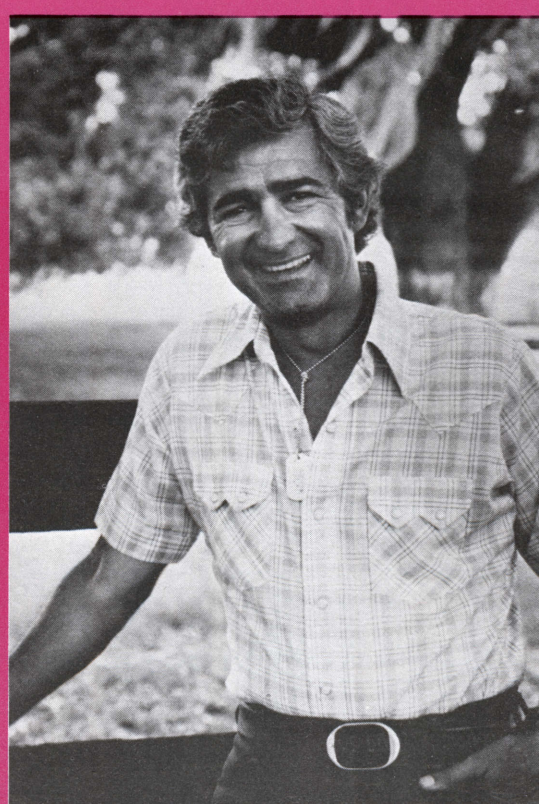
A story usually began from ideas submitted by field producers and their contacts. They were judged on a number of factors including availability of fish or game, local experts, location, weather, etc. Film shoots were grouped together as much as possible.

For example, I took a "house crew" to Minnesota, Ontario, Wisconsin and Michigan on an 18-day swing in late September and early October to work with Midwest host Al Lindner.

Soundman Skip Comstock, Assistant John Brooks and I were able to produce an average of one seven-minute action fishing segment every two days.

Glen Lau and other crews were working at the same time in Pennsylvania

Jerry Chiappetta, SPORTS AFIELD TV host and production supervisor for Glen Lau Productions, during a pause in the action while working on two programs.



and New Jersey with the Eastern host, Jim Bashline. In the far west, John Fabian and his independent film company worked on other stories.

Former American Sportsman (ABC TV) filmmaker, Scott Ransom, had his team filming such things as the national Bison Roundup with SPORTS AFIELD host Grits Gresham. Then he moved into Glacier National Park in Montana to film a documentary on the migration of Bald Eagles.

Sharon and Wolfgang Obst of California worked on features on the fun of soaring, the dangers of poisonous snakes, the transfer of Tule Elk in California, as well as several personal profiles of a bird carver and a folk singer with a conservation message.

Robin Miller of Eastern Pennsylvania worked with me and Glen on numerous segments for the Eastern Outdoorsman series, and one on the famous Hawk Mountain reptor sanctuary near Allentown, Pa.

The "troops" in the field had problems and adventures that would fill a cinematographer's text book. For example, how do you get an Arri 16S repaired in Funkley, Minnesota, (Pop. 19)? What do you do when underwater cameraman Smokey Roberts goes down 110 feet into an underground cave, begins filming SCUBA divers and discovers he forgot to fill his air tanks?

Regarding the Arri—nobody in Funkley even knew what an Arri was, let alone how to get one fixed. You do it yourself with a penknife and gaffer's tape.

In the deep, black cave, you get the hell out in a hurry.

In the Red River on the Texas-Oklahoma border while doing a film on how to catch Striped Bass, we nearly lost assistant John Brooks when he was swept downstream clutching the underwater Milliken camera. Skilled boat handling by soundman Skip Comstock saved both John and the equipment.

Glen Lau was directing a dangerous fishing sequence off the rocky New Jersey coast in pounding waves when disaster struck. Glen, a former guide himself, is a firm believer in Murphy's Law (if something can go wrong or break down, it probably will—squared by the number of elements involved).

They were shooting a story and using the outboards to hold both the fishing boat and camera boat safely away from the sharp rocks. Glen was wary about the engines so he called for one of the assistants to have a strong line ready to throw just in case. No sooner had he taken his precaution when one of the engines died. The rope was thrown, caught and tied off just a few feet from certain catastrophy! Equipment and people were all saved.

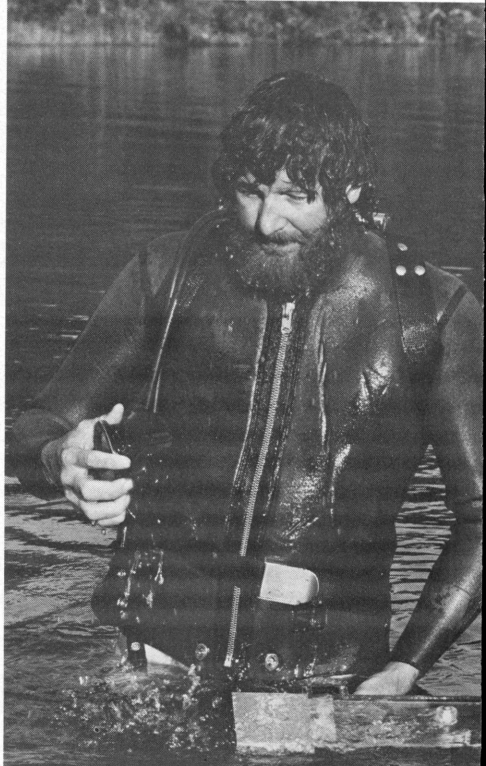
The Tower Boat is a specially-made flat-bottom boat with outrigger floats for stability. It was designed by Glen Lau Productions to give steady, high-angle shots of fishermen and "strikes". A gaffer steers the Tower Boat with an electric trolling motor that is almost silent. (BELOW RIGHT) Producer-director Glen Lau wades into the water to get a split-level bass shot.

The workhorses for us in the field proved to be the Arri 16BL and the Eclair ACL with Nagra IV recorders. Countless underwater sequences were undertaken by us with high-speed Milliken and an Arri 16S.

We also had the task of documenting some of the film stories with 35mm shots which were done with Nikon F model still cameras.

Work was so fast and furious from one assignment to another, producers, directors and technical crews usually had less time between jobs than our Cine 60 power belts to "recharge".

We racked up 140,000 miles on one Ford Van during the epic adventure. Transportation modes included everything from vans to snowmobiles to airboats to swamp buggies to private air-



planes to cover the nation.

We learned great respect for Angenieux lenses—a pair of 12 x 120's for our Arri 16S and the Arri BL and a 9.5 x 57 for the Eclair. Five Schneider lenses from the Arri 16S were usable on the Eclair ACL. The "baby Arri" (the 16S) was custom fitted into an acrylic underwater housing with a no-focus 5.7 Kinoptic lens. Extreme closeup work on fishing flies, small hooks, etc., was handled by the 16S and a Macro lens.

Often the 9.5 x 57 Angenieux could get us close enough without special effect lenses.

Glen had trouble with wireless microphones in the past and was reluctant to trust them on remote locations so we wired everybody with Sony ECM 50's directly to hidden Nagras. At times we were able to shotgun our subjects using a Sennheiser Mike with a heavy windsock. We also used a DL42 Electrovoice.

O'Connor Model 50 Fluid Tripods were great for our use—heavy enough for quality without being backbreakers when you had to pack them. The aluminum legs were never designed for the kind of rugged use we put them to, such as being driven into the red mud of the Deep South or into the saltwater of the Gulf of Mexico. WD-40 spray lubricant helped!

I also liked the quick leveling aspect of the O'Connors with the bubble levels.

About half the time we used body braces because any tripod is useless in the small boats we had to work from. The trick is to stay limber, using your legs and knees as human shock absorbers to keep a steady camera and level horizon.

Banging around the country—literally—can be ruinous to equipment. We have developed a special "tackle box" camera and equipment case adapted from Adventurer™ fishing equipment boxes. We remove the trays, pad them with camera packaging foam, cut out the slots for equipment and lenses and come up with excellent, sturdy, almost waterproof and very unpretentious shipping and storage cases!

On the outside they still look like tackle boxes and are not particularly attractive to thieves. They withstand pressure, can be stacked and stored for shipping—even on airlines! We spray them white and mark them with various colored strips of tape so we know what's inside each one.

Our basic stock in most of the OUTDOORSMAN shows was 7252 ECO and for most of the SPORTS AFIELD segments we used 7242 Negative.

Using different stock drove Supervising Editor Mike Palma nearly nuts. ECO went to Russel Film Lab in Jacksonville, Fla., and Negative to DuArt in New York. Various crews had to keep changing back and forth from one stock to another, changing meters and photographic thinking due to the different characteristics of each film.

Palma's problems were compounded when judging and editing film became a factor. Conforming the two different films was also a problem—keeping track of which lab had which film stories and which conformer was getting which original! It was madness.

For speed of handling under the most adverse conditions of heat, cold, dust and sunshine I'll take the ECO anytime. Not only is it excellent and durable in the field, but I feel it gives a better color

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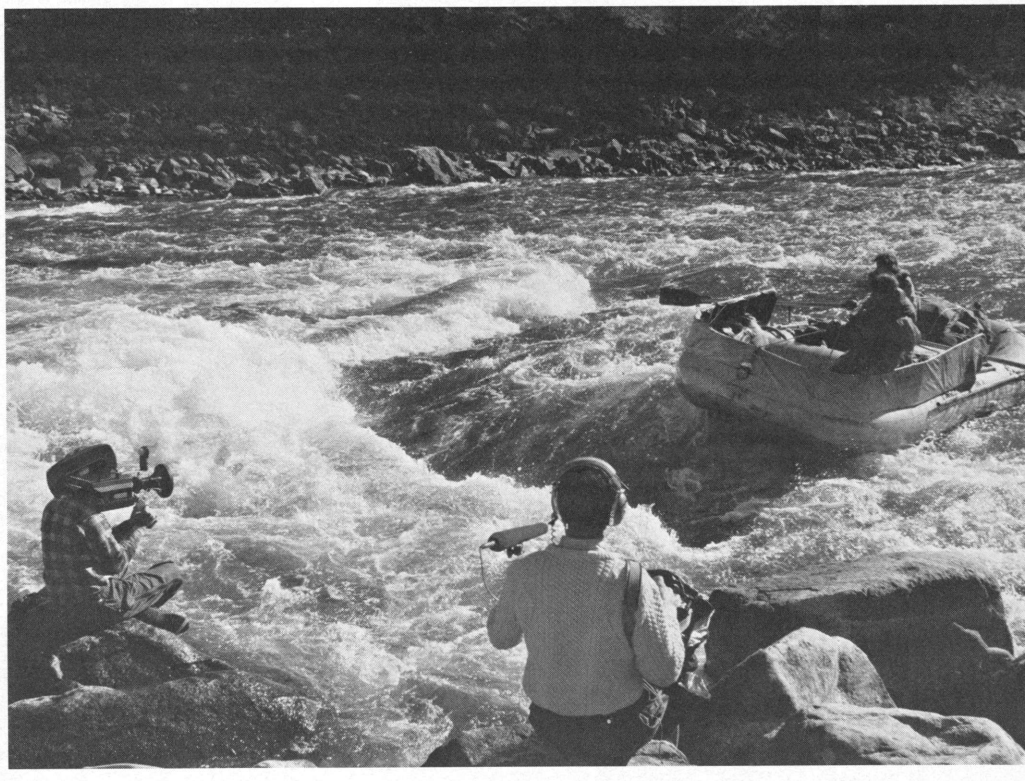


Transporting crews down the Salmon River to meet Mountain Man Buckskin Bill was a major effort. The required gear weighed about two tons. (BELOW) Filming a rafting sequence. Getting there and documenting it was half the work and fun of the feature. The CP16 came a with 9.5mm wide-angle lens does the job for one-camera team.

THE ELEMACK STORY

The latest in this publication's salutes to manufacturers of outstanding motion picture equipment pays tribute to a man who originated an entirely new concept in the design of dollys

By DAVID W. SAMUELSON

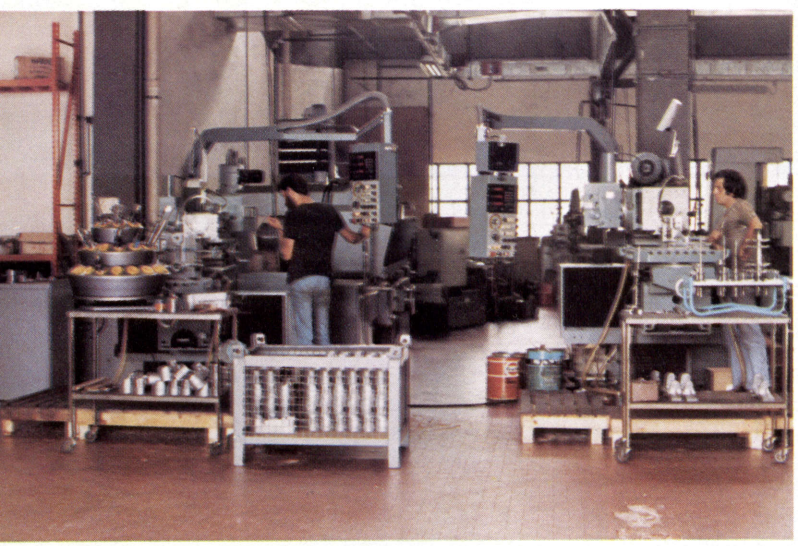
In 1962 an Italian engineer, Sante Zelli, left his native city of Rome on a sales tour to promote a revolutionary new type of hydraulically-operated, single-column dolly he had recently invented.

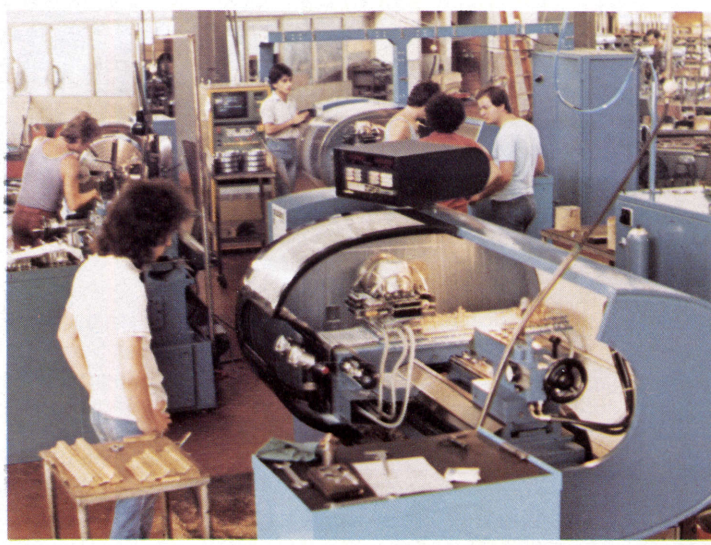
There had never been a dolly anything like it before—meaning that he not only had to overcome the film technicians' natural reluctance to use strange equipment on important assignments, but also something innovative from a far distant land. By 1979, Zelli had manufactured and sold more than 2,500 Elemack Spyder dollys to more than 60 countries all over the world—by any standards, a notable achievement.

There were a number of aspects of the Elemack Spyder (or Octopus as it is known in Britain) which made it unique from the very beginning. Its single column with an integral foot-operated hydraulic pump, adjustable wheels (the configuration of which may be easily changed from compact to wide spread or to an extremely narrow gauge), the possibility of the steering being changed from four-wheel crab to two-wheel steer, and the availability of alternative wheels, one type which will run on a smooth floor and another which will run on tubular track that can easily be laid on rough and undulating surfaces. Sections of tubular track which may be laid in a manner similar to sections of toy railway tracks were an innovation in themselves and contributed to this form of dolly becoming a "system".

Over the years the versatility of the Spyder has been increased by the introduction of the Mini and Jonathan crane arms (which gave the possibility of

(LEFT) Sante Zelli, inventor of the hydraulically operated, single-column Elemack dolly. It was considered revolutionary when it first appeared in 1962. From then until 1979, 2,500 Elemack Spyder dollys were sold in more than 60 countries. (RIGHT) Zelli plays host to Jean-Marie Lavalou, himself the co-designer of a revolutionary new piece of motion picture and TV equipment, the LOUMA CRANE. Both men had the vision and initiative to create devices that are totally innovative in affording the cinematographer increased mobility. (BELOW) Views inside the Elemack factory in Rome.



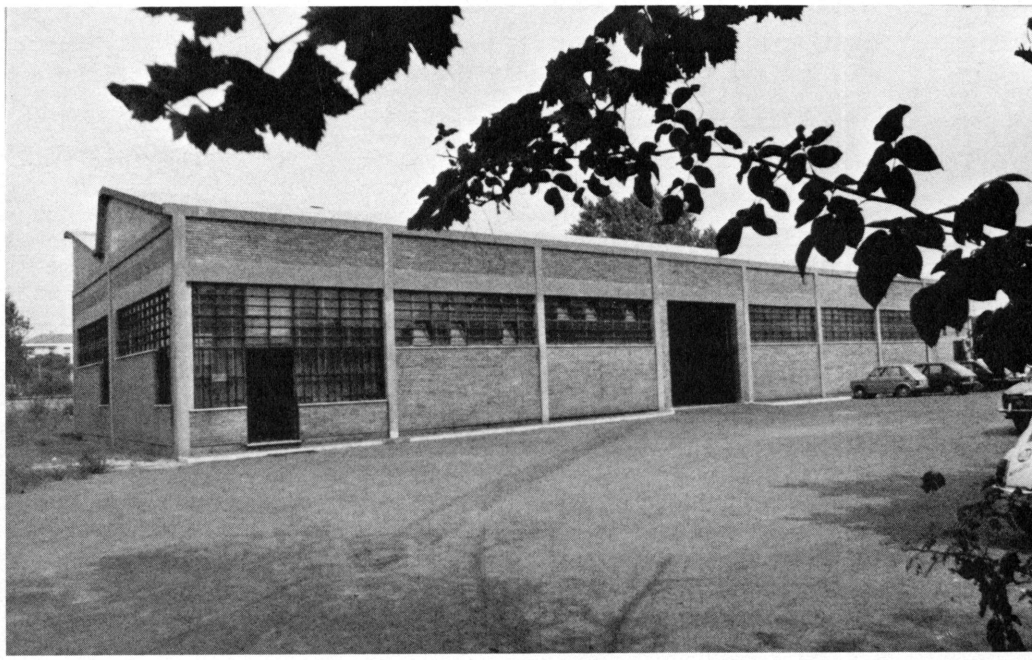


greater reach, height and overhang, of moving the camera up, down and slewing it around in-shot), the Snake arm which makes possible ultra-low camera positioning, the combined surface and track wheels which makes it possible to operate the dolly alternatively on a flat surface or on straight track without the time-wasting operation of changing the wheels, and so on.

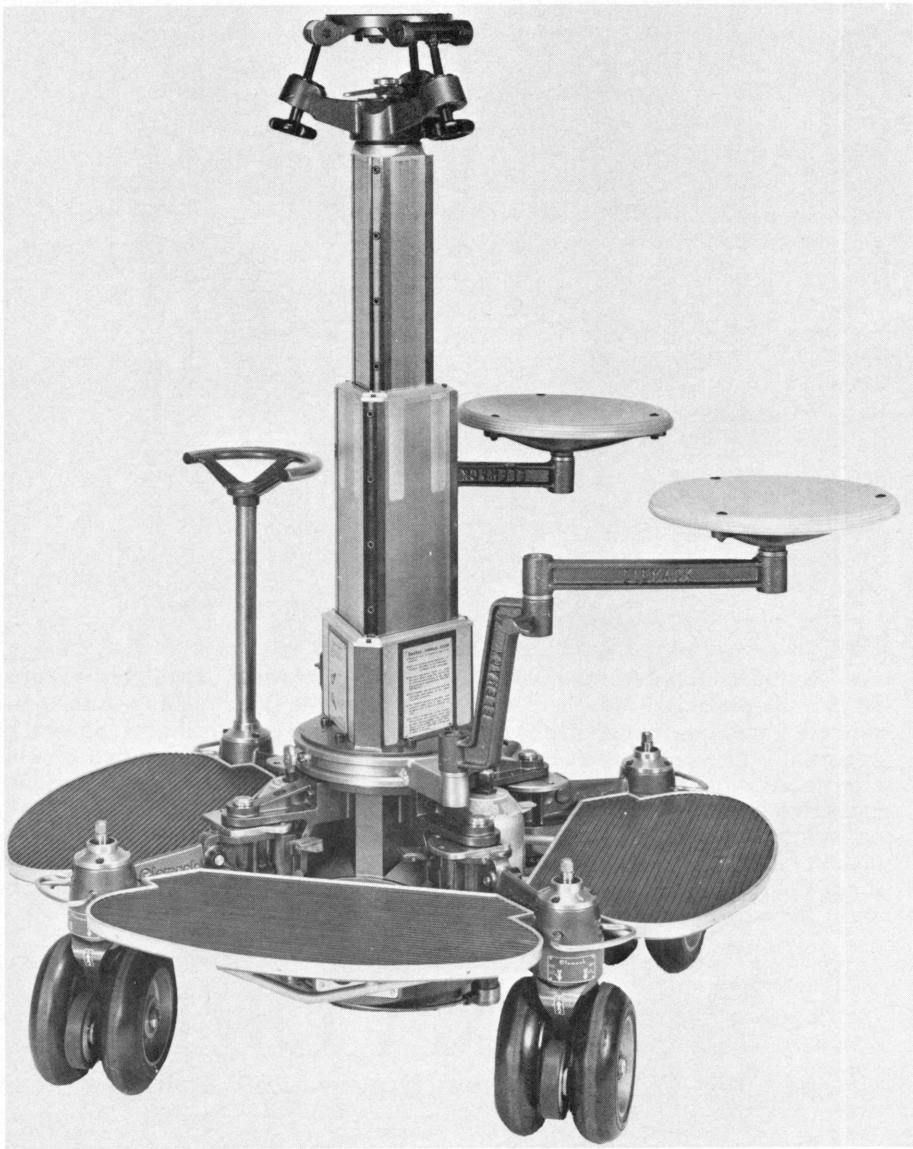
Now, with the introduction of the new Cricket dolly, Sante Zelli has retained the original concept of a single column on a multi-configuration wheel system, but has made it a column which may be raised or lowered in-shot with extreme smoothness.

The principal difference between the Spyder and the Cricket is that the old pedal-operated, triple-hydraulic columns have been replaced by a new double extension elevating system operated by an Electro-Hydro-Drive unit. The two extensions operate simultaneously, being positively linked together by a chain system.

The two extension tubes of the Cricket dolly are made of triangular-shaped aluminium alloy extrusion which run smoothly together on roller bearings on hardened and ground steel guides. This system assures rigidity between the col-



Exterior view of the Elemack factory in Rome. (BELOW) The new Elemack CRICKET dolly. It is unique in that the old pedal-operated hydraulic columns have been replaced by a new double extension elevating system operated by an Electro-Hydro-Drive unit. The two extensions operate simultaneously, being positively linked together by a chain system.



MAIN FEATURES OF THE CRICKET DOLLY

Triangular columns operating smoothly by roller bearings running on hardened and ground self-cleaning guides.

Column steadyness in all positions without necessity of brakes.

Quiet action electric hydro-drive system with manual hand pump as back-up.

Positive speed control with soft stop at both ends of the column movement to avoid bumping.

Easy manoeuvrability usual Elemack element reliability.

Uses the famous Spyder adjustable legs and wheel system.

Detachable platforms.

SPECIFICATIONS:

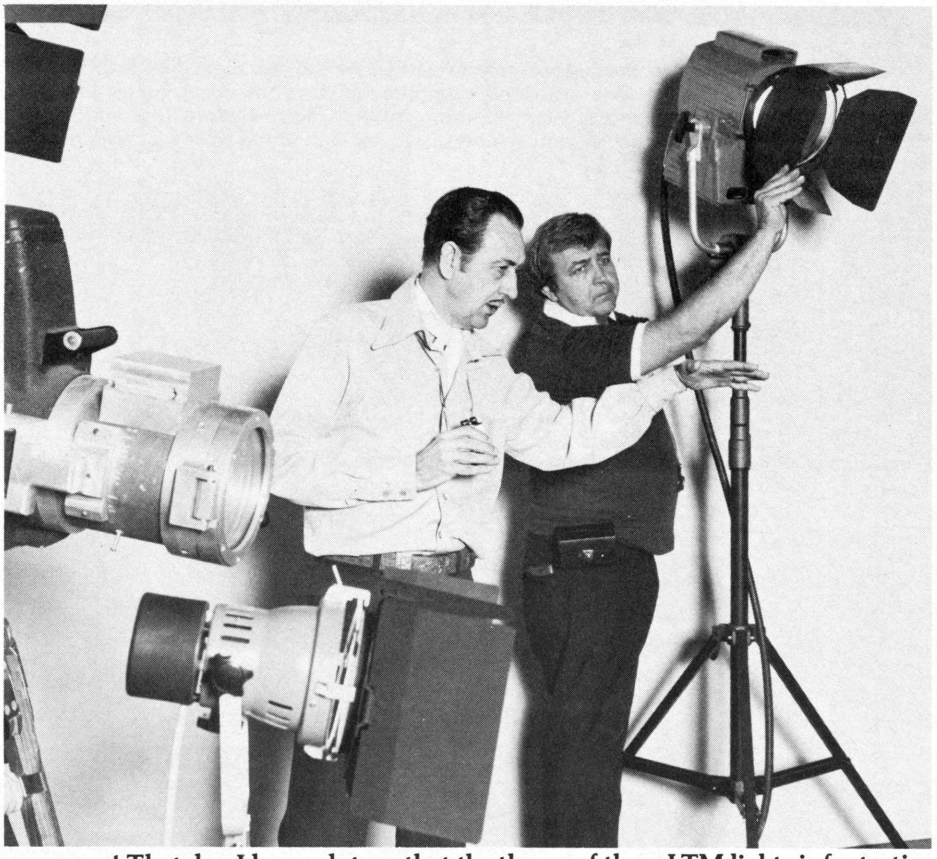
Max. height from ground (Top of column)	51 3/4" /132 cm.
Min. height from ground	25 3/4" / 65 cm.
Extension	26" / 66 cm.
Min. track gauge	14 3/16" / 36 cm.
Max. track gauge	24 7/16" / 62 cm.
Max loads on camera base	260 Lbs./120 kg.
Compensation for weight variation (pressure valve)	by adjustement of
Weight	300 Lbs./136 kg.

STUDIO HEAD/PRODUCER/DIRECTOR

EWING "LUCKY" BROWN

"... only those LTM lights saved the production!"

"In simple fact," relates veteran filmmaker "Lucky" Brown, "just three LTM 4K's directly saved me from a loss of many thousands of dollars under sudden, unpredictable location conditions. Every gaffer and cameraman knows that lighting is the basic art on which all of motion picture production hinges. Film can record only the permutations of light on the subject, automatically making the source and character of light critical factors. Just how critical was re-emphasized when an international soft drink TV commercial definitely required a canoe trip and a picnic in the Northern California Giant Redwoods on a perfect, sunshiny California day. It was an unusually big cast, key talent was available for one working day only, and the TV air date schedule allowed for no postponement. Forecast was for bright, ideal weather . . . so it turned out heavily overcast, threatening rain; in addition to which, the thick overhead canopy of the huge trees almost totally screened out what little light there was. The forest was literally dark as a tomb, the river near as bad. To fake it with other lights would have required no less than the biggest brutes and arcs, with all the obvious handling and power problems and still no real 'feel' of sunlight. As it happened, one small generator and my three 4K LTM HMI lights were more than enough to give us the most cheerful, most sunshiny picnic and canoe trip on 'sun'-sparkling water you've



ever seen! That day I learned, too, that the throw of these LTM lights is fantastic; despite the semi-dark weather, we got virtually the same meter readings on our canoeists 'way out in mid-river as within just a few feet of the lights. Several other potentially disastrous incidents, including a critical key-scene match of a bright afternoon action sequence that ended up having to be shot in a lead-weight San Francisco fog, cemented my conviction that a company is foolish to take chances on location shoots with any lights other than LTM's. I believe there is no type or make of light that I haven't at some time used in production, and it's my opinion that LTM now produces the most practical, efficient and economical line of lights in the industry."

Studio head Ewing "Lucky" Brown is one of those rare products of the industry who is truly exceptional in professional performance of nearly every function of movie-making up to the doors of the film lab. His motion picture career began as the "Little Rich Kid" in the original "Our Gang" comedies, and he appeared in literally dozens of major feature films before turning his talents from acting to production. For many years he has been recognized as one of the most skillful and creative film editors in the field. As director of photography and as director, he has lensed motion pictures on three continents and a good many islands of both Atlantic and Pacific; feature films, TV shows and commercials, industrial films, training films . . . name it, and he has shot it, picking up a long list of awards in many different categories along the way. He also has been instrumental in development of an ultra-high-speed camera, special-project silent housings, and other specialized motion picture equipment. As president of Movie-Tech, he has produced a number of successful box-office feature films, several hundred industrial, sales and training films, TV shows, and he stopped counting TV commercials when he passed the thousand mark, years ago. Lucky Brown recently realized a long-time ambition with completion of his new Hollywood Movie-Tech studio; a compact, totally self-contained production facility, from soundstage and recording studio, transfers and dubbing, to film splicers . . . including, we are pleased to note, both HMI and Incandescent LTM lights.

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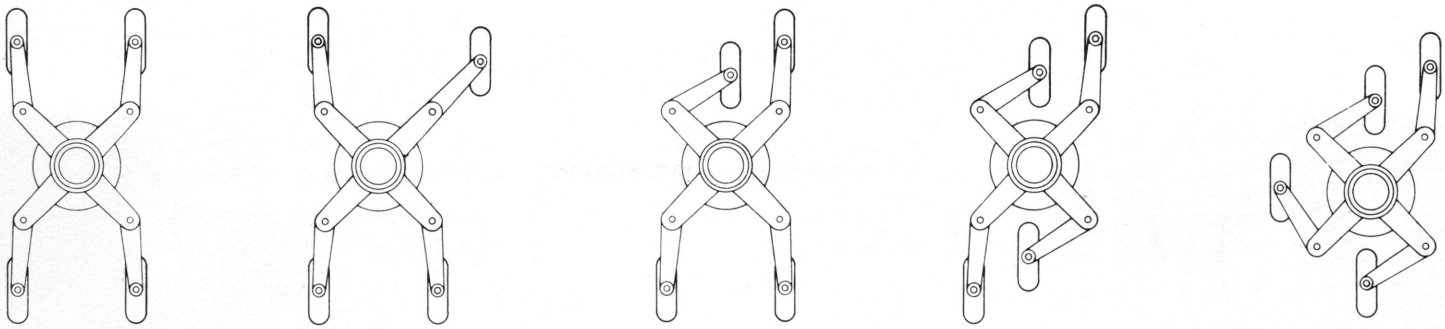
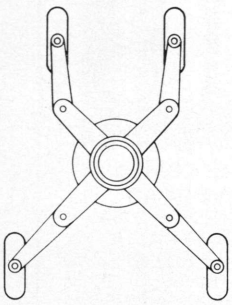
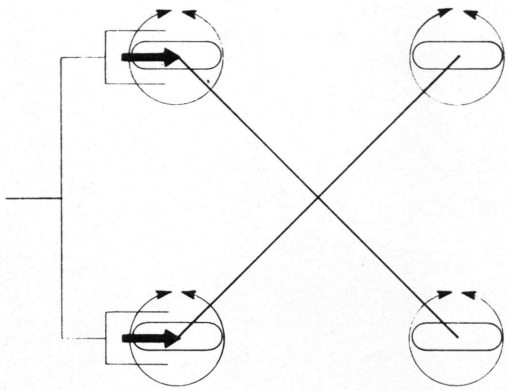
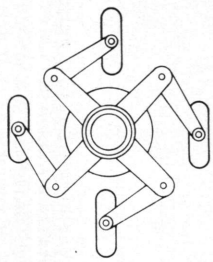


Wheels set in the narrow (36cm) configuration.



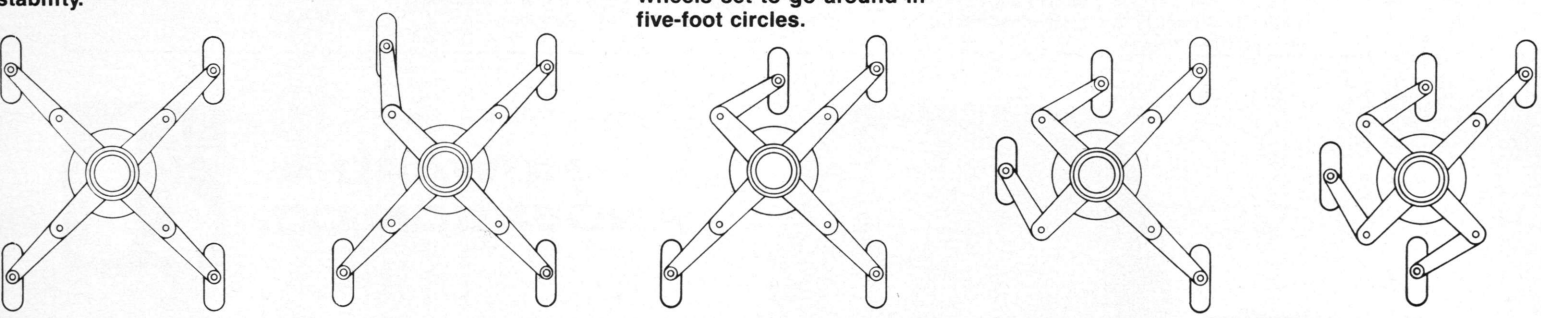
The Elemack Spyder RS/2+2 is, in essence, a dolly with four adjustable legs that allow many positions. Twelve different positions are here illustrated. The four synchronized wheels can crab and, by simply pushing a lever, two of the four wheels can be streered as directional wheels, leaving the other two in locked straight position.





Wheels set to most compact configuration for easy transportation.

Wheels set to widest (62cm) configuration for maximum stability.



Wheels set to go around in five-foot circles.

DIAGRAM ILLUSTRATING TWELVE BASIC WHEEL CONFIGURATIONS OF THE VERSATILE ELEMACK SPYDER DOLLY.

umns without the need for clamps on the top of each section.

There being only one hydraulic cylinder on the Cricket, it follows there is only one 'O' ring, thus reducing the amount of periodic maintenance required.

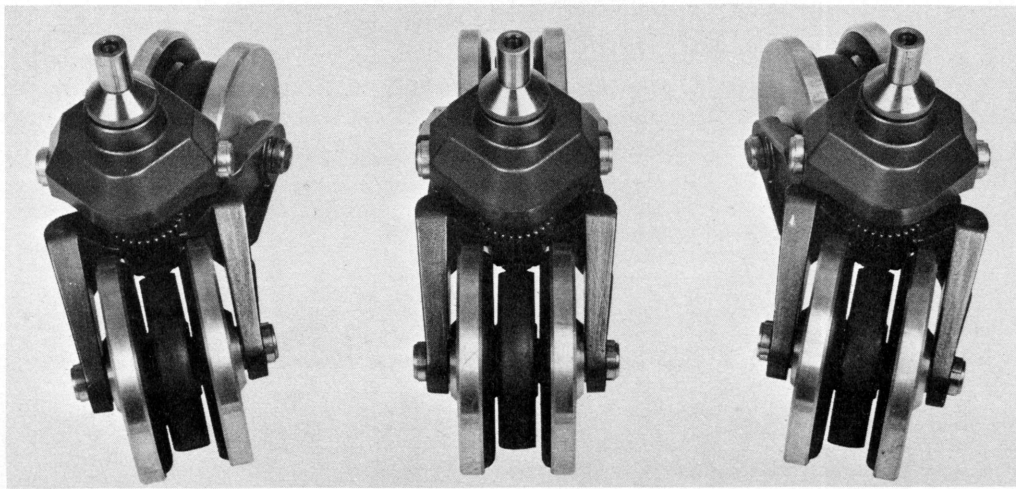
The Electric-Hydraulic Drive unit incorporates a 115V AC/DC motorised pump, a manual back-up pump, two hydraulic accumulators and all the necessary hydraulic controls to give an exceptionally wide range of variable speeds in either direction with an automatic soft stop at either end of the travel.

The 26 inches of vertical movement can be set to go infinitely slowly or as fast as three seconds, the speed of a person sitting down or rising up from a chair.

With a Panaflex camera mounted on a Panahead, the minimum lens height is

Continued on Page 734

The new Elemack self-steering bogey wheels. Note how the pairs of wheels are geared together, so that the front wheel causes the trailing wheel to steer around a curve, thus curing a fault which has deterred many dolly grips from using curved sections of track. The articulated bogey wheels will make it easier for either dolly to be run on straight or curved tracks.



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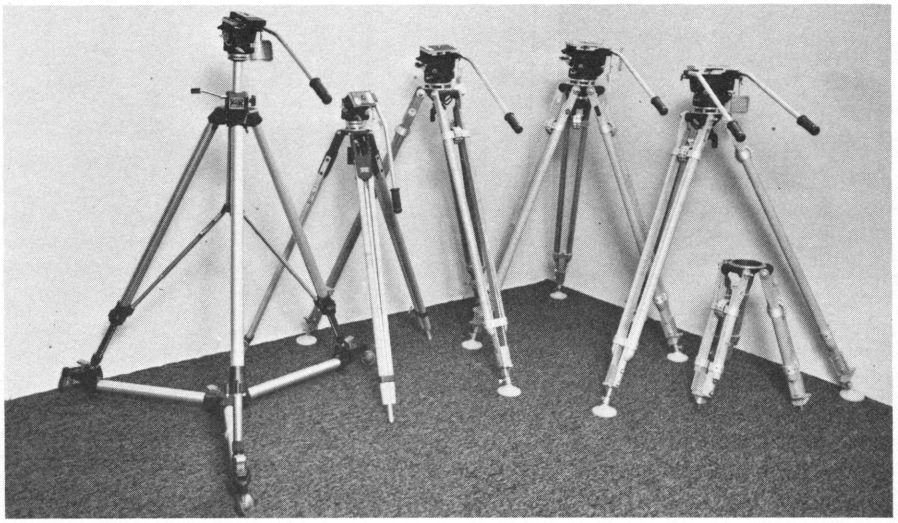

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dupes or without any picture at all! On two separate occasions it was necessary for Alan to bring his synthesizer equipment to the dubbing stage and do effects direct to the picture. The results were the "Voice of V'ger" and the "Ilia Probe Voice" which were so effective that it was required by Robert Wise that Alan's technique again be employed in the foreign dubs.

Alan is currently completing THE FINAL COUNTDOWN, a picture about the nuclear powered aircraft carrier U.S.S. Nimitz which on a routine mission in the Pacific, disappears into a mysterious storm and emerges intact off Pearl Harbor, December 6, 1941. Aspen Productions brought Alan on the project to tackle the "storm" sequence but it was quickly realized that there were other applications for his synthesized effects. In one reel, there is a dogfight using F-14 Tomcat jets which are doing many maneuvers. The production recording of real jets consisted of only pass-bys to a stationary microphone, but what was needed to make the sequence work was a sound that was manipulated to fit each move. The answer was clear: synthesized jets. Working to a video tape, these seemingly acoustic sounds of jets were custom-tailored to each scene. The same was true for launches and landings on the carrier where there was a feeling of power that the microphone could not capture. The synthesizer added that missing element. When it came time for the "storm", many synthesized elements were orchestrated to complete the necessary product. First generating thunder and wind, then blending electronic textures, the result was a time warp effect.

Says Howarth, "I think that the use of synthesized material has only to be demonstrated and any producer can clearly see its advantages. Many variations on any effect can be quickly generated or, if necessary, accurately re-generated to supplement a sound track. Through the use of programmable equipment, any previous program (up to 40) can be *exactly* recalled and still further modification can be accomplished by building on the original program."

"I have also found that a minimum multi-track technique is necessary to achieve final product. By interfacing multiple synthesizers, a very complex texture or event can be made. A majority of my effects were done as "real time" events direct to only two tracks. This process makes everything simpler. Results can be evaluated much faster, saving effort and expense in attaining a

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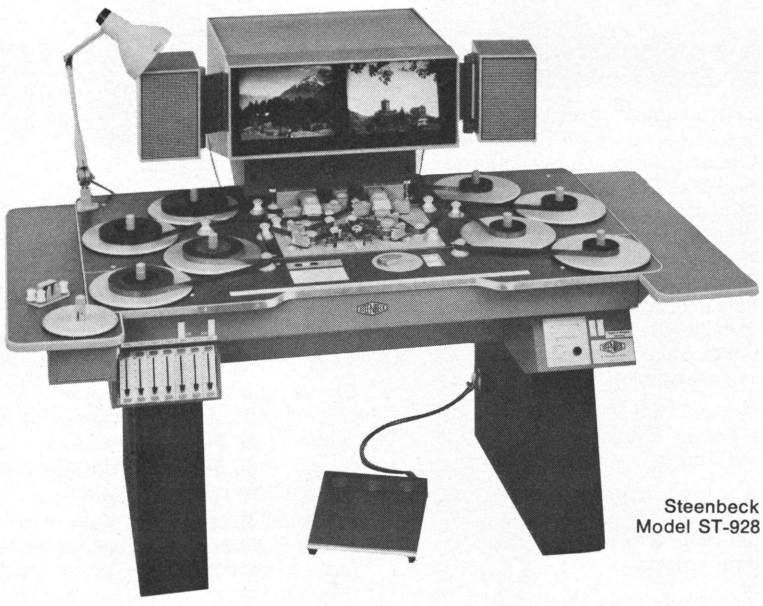

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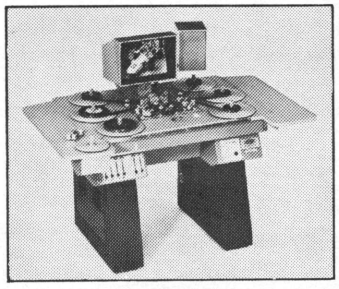

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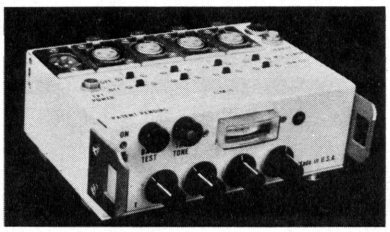

The CM-1 operates on two 9-volt batteries or external power 9 to 20 volts with + or − ground. The CM-1 also supplies 12 volts AB power (12 volts phantom power available) for shotguns. All audio connectors are standard XLR. Balanced inputs have individual low-cut equalization − 12 dB at 50 cycles. The output is switchable to balanced mike level or balanced line level. Features VU meter, line-up tone, battery test and LED peak indicator (adjustable).

The size is 6.5" X 3.5" x 2". Weight is 31 ounces. Frequency response is 40 Hz to 18 kHz ± 1 dB.

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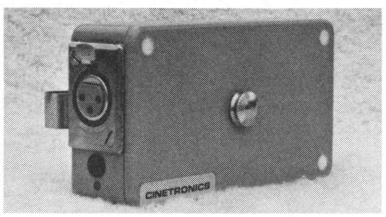

All models include a belt hook and feature true balanced in and outputs. Twist-lock battery cover allows fast battery change. Built-in battery test LED lights when input is connected to output. Uses two standard 9-volt radio batteries. The unit is automatically off when microphone is unplugged. Model CS-2 also features a built-in slide-switch activated 10 db attenuator and a low-cut-1 db at 100 Hz, -12 db at 30 Hz.
List price: CS-1 P (RD) $75, CS-1 M (RD) $86, CS-2 P (RD) $98, CS-2 M (RD) $113 P-Plastic M-Metal

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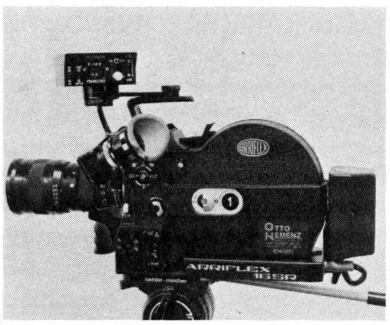

Variable speed unit/footage-meter counter and tachometer for ARRI 16SR. $1,145.

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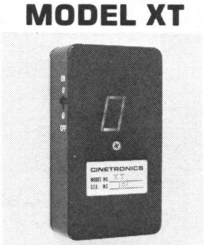
CAMERA SPEEDTESTER MODEL XT



Checks the speed of any through-the-lens viewing camera.

Part of the rotating 0 is seen in the viewfinder. When the camera is running at 24 frames/second, the 0 appears to stand still. Lower camera speeds rotate the 0 clockwise. Higher speeds rotate the 0 counter-clockwise.

The unit is crystal-controlled. Requires one 9-volt battery. Features quick-snap battery lid. Housing is solid aluminum, black texture finish and engraved. Almost as small as a cigarette package. Switchable to 25 frames/second.

Six-month warranty. $120.

product. All this equipment was designed and packaged to be very portable. It is often not necessary to use more than a few units to achieve amazing results. Additional signal processing equipment is often on location, so all that is needed is the synthesizer and a knowledgeable operator."

But without a creative person to operate it, such electronic wonders are useless.

As for the future of synthesizers themselves, so far only microprocessors are in common use, although there are already products incorporating larger computers. These components will yield new capabilities, such as very complex event sequencing, time code interface, analyzer inputs to develop programs from real sounds, and much more. Alan S. Howarth will surely be there to apply these new opportunities to film sound applications and to compose entire orchestrations as flowing digital formats of imagination. ■

FILMING IN TIME WARP
Continued from Page 688

ing past or through things, whereas, in a zoom shot you are moving straight in or, to put it another way, you are progressively enlarging the same composition. Also the "look" created by the use of the zoom is different from that of a flat lens. This is so because, while most zoom lenses today are crisp and very effective in what they do, they tend to be optically different from a corresponding prime lens of any focal length. The third factor in sticking with prime lenses is the fact that a lot of our practical locations are quite large and to get enough light to work at the T/3.5 maximum aperture that is typical of zoom lenses would be quite costly in time and effort. Also there is the simple matter of taste. Jeannot as a director and I as a cameraman both prefer the old-fashioned school of filmmaking where you move your actors and you move your camera and you don't use the zoom to do the job.

QUESTION: I'm impressed with the amount and fluidity of the camera movement in SOMEWHERE IN TIME. Would you say that there is more than the normal amount of camera movement in this picture?

MANKOFSKY: We certainly did use quite a lot of camera movement in this show, but it's not there just for the sake of moving the camera. It was designed to facilitate the plot and further the effective telling of the story. It was not a thing that was designed into the show for the purpose of moving the camera at every

opportunity. We used the dolly quite extensively as one more tool in the telling of the story, but not as a gimmick. I've heard of projects where the director has said, "I want the camera moving at all times." But that was not the case on this picture.

QUESTION: Earlier on you described the Grand Hotel on Mackinac Island as the "third star" of SOMEWHERE IN TIME. Can you expatiate a bit on your experience in shooting there?

MANKOFSKY: The Grand Hotel is indeed "grand" and all the superlatives one might use in describing such a place are applicable in this case. It's a huge wooden structure—the largest I've ever seen—with a dining room 250 feet long and a front porch 800 feet long, all of which had to be lit at one time or another during the production. The complication was that the only time we could get in there (and the only time our star was available) was during peak season. The hotel is 95 percent booked in advance for the entire season, so at first the hotel management was a bit reluctant to have us there, but they warmed to the idea of immortalizing their hotel on film and turned out to be tremendously cooperative (beyond our wildest dreams!) in facilitating the shooting of the film. But in spite of this, we had to schedule our work around the continued operation of the hotel and its hundreds of guests and that created a certain amount of difficulty—especially in areas that remained open to the public, such as the lobby. We couldn't shut them off completely and we continually had to work around them. Also, many areas of the hotel were used for both the 1979 and 1912 sequences, which means that they had to be converted and redressed to fit those respective periods. All this redressing had to be done between meals or between peak periods in the hotel's normal operation. This added up to delays which we had to handle in one way or another.

QUESTION: How did these factors affect the lighting which you had to rig in the practical interiors?

MANKOFSKY: For lighting large areas like the dining room, the crew would have to come in for two hours between breakfast and lunch and another three hours between lunch and dinner to try to pre-rig and pre-light some of the areas. Also, because the place is so old and is made entirely of wood, the fire hazard was extreme, and we had to take tremendous precautions to avoid any mishap. All of this meant that we weren't

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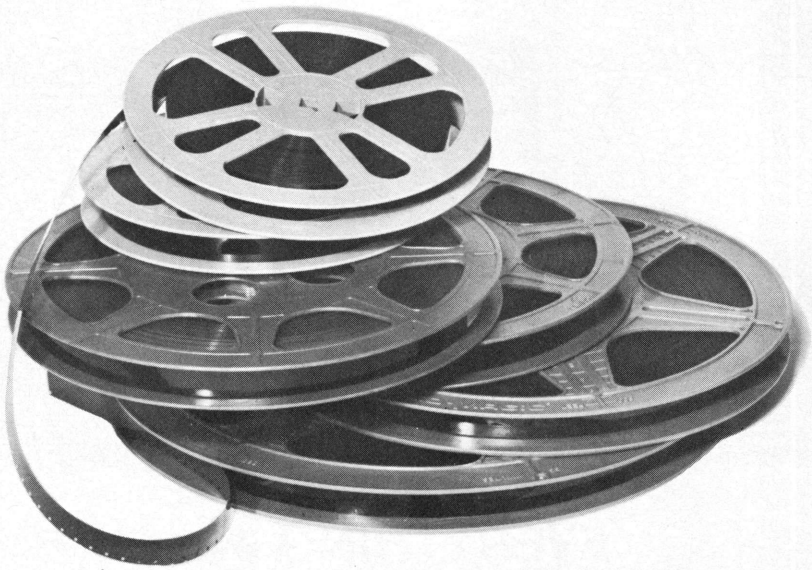

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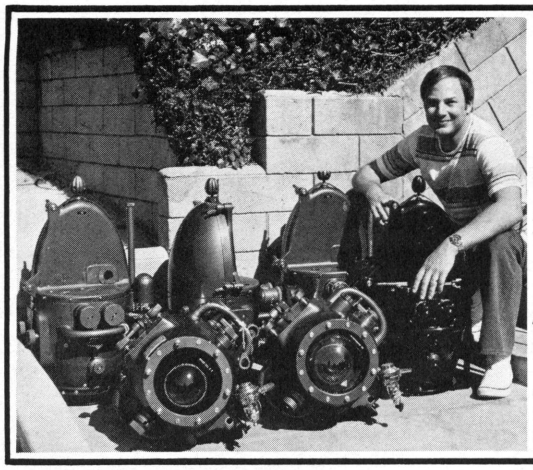

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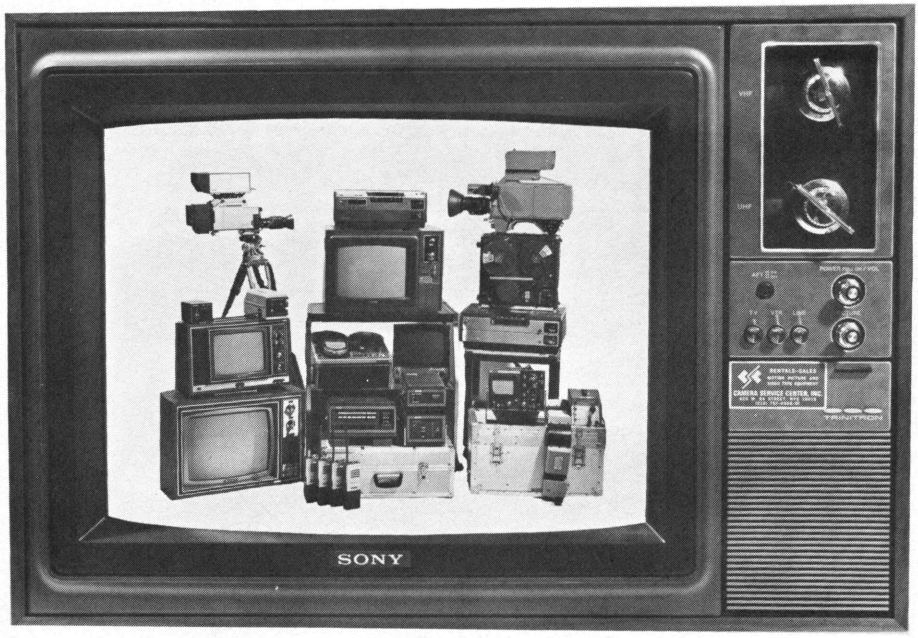
able to use any of the larger lighting units in the place. We had to work at lower light levels than I would have liked, which again sort of points up the reason we were using prime lenses, rather than a zoom lens employed as a "variable prime". The way budgets are these days, SOMEWHERE IN TIME is not a high budget film and a good deal of the budget had to be expended simply in getting people and equipment to Mackinac Island—but having the use of such a lovely location made it all worthwhile. ■



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WHAT'S NEW
Continued from Page 640

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The new "Frezzi-Lites™" portable camera lights attracted attention.

"Frezzi-Flex®" Model FR-16 series 16mm ciné cameras designed for domestic or outside U.S.A. filming of documentaries and TV features had "hands-on" demonstrations. The booth manning staff included Jack Frezzolini, V/P Operations, Jack Zink, Sales Manager and Jim Crawford, V/P Engineering.

For detailed product information write to Sales Manager, FREZZOLINI ELECTRONICS INC., 7 Valley Street, Hawthorne, New Jersey 07506, U.S.A. or telephone him at (201) 427-1160 or (212) 594-2294.

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NEW VIDEO TRIPODS FOR LIGHTWEIGHT CAMERAS

QuickSet, Incorporated announces the addition of two new ultra-durable, lightweight aluminum tripods to their Husky® Tripod line. Each unit is especially designed for video cameras up to 20 pounds. Two models are available: a conventional tripod with extendable legs or a trolley with removable 3″ wheels.

Both units feature QuickSet's unique safety Pan/Tilt head. An external counter balance spring prevents accidental camera "nose dives," yet permits fast, smooth movement through 360° pan and +60°/−90° tilt. Additional features include fingertip column lock/drag adjustment and micro-fine center-of-gravity adjustment for perfect camera/lens balancing. Double rack and pinion gearing prevents column "run-down." Strut leg supports assure rigid stability. A lusterous black finish will retain its beauty through years of tough service.

For further information on the Husky® tripod or Husky® trolley, contact: Quick-Set, Incorporated, 3650 Woodhead Drive, Northbrook, Illinois 60062. Phone 312/498-0700.

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NEW CAMRAPROMPTER SYSTEM AVAILABLE FROM CINEMA PRODUCTS

Cinema Products Corporation announces the availability of its new film/video camera prompting system—*Camraprompter,* a low-cost, ultra-lightweight system: easy to set up and simple to operate.

The unique *Camraprompter* system (patents pending) utilizes a *clear* acrylic optical flat set at a 45° angle in front of the camera lens. The optical flat acts as a mirror reflecting the bright, easy-to-read script to the subject being photographed, with *virtually no light loss to the lens.*

A side-mounted light source is used to back-light the script "scroll." The script copy can be typed or hand-printed onto the matte-finish clear plastic 25-foot roll which is advanced by means of an ultra-silent, miniaturized motor drive. Continuously variable speed control (forward and reverse) is provided by a small remote control unit which can be operated by the "on camera" subject, or by the person in charge of pacing the sequence who is viewing the script scroll from the side of the *Camraprompter* unit.

Powered by a standard 12V battery pack or belt, *Camraprompter* is an ideal prompting system for documentary, educational or industrial assignments, and all applications generally shot on location.

The *Camraprompter* is priced at $1800.

For further information, please write to Cinema Products Corporation, 2037 Granville Avenue, Los Angeles, California 90025. Tel.: (213) 478-0711 or (213) 477-1971.

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G & M PRODUCES NEW POWER UNIT FOR ARRIFLEX 16SR

A new, sophisticated battery/battery charger system for the Arriflex 16SR is being manufactured by G & M Power Products of Hollywood.

The new energy system delivers 150% more power than existing units, according to Gideon Ben-Akiva, company president. The battery has a solid-state L.E.D. battery condition monitor; will fully charge in five hours or in 2½ hours with optional unit. Comes with the GM8VS automatic cutoff charger. The battery

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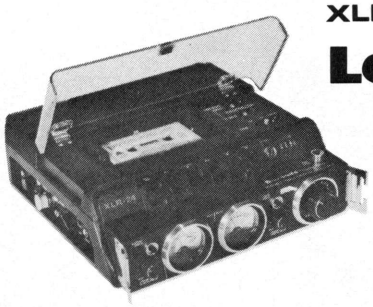

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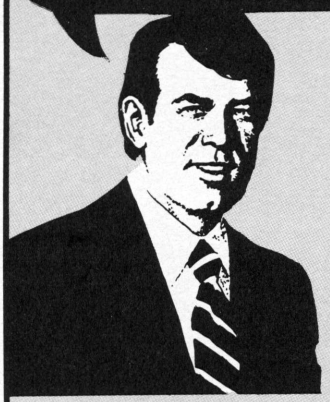

This unique battery condition monitor, available only from G&M, will take the guess out of using battery units. It will show you precisely how much power is left in your battery while your camera is running, giving you a sufficient warning for a battery change. Its plug-in capability allows you to check any 12, 16 or 30 volt battery for quick indication of unit's charge or discharge condition.

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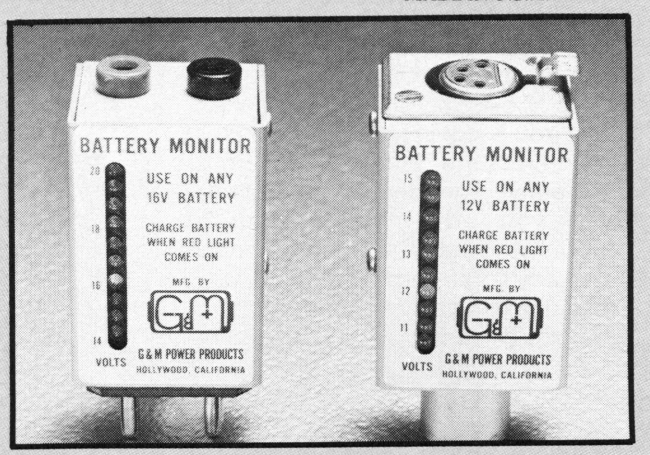

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pack lists for $295.00 and a double battery charger lists at $355.00. For additional information, call or write G & M Power Products, 6500 Santa Monica Blvd., Los Angeles, CA 90038—(213) 465-8236.

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NEW ARRIFLEX 16HSR CAMERA

Arriflex Corporation announced the availability of a new 16SR high speed camera, capable of operating from 10 to 150 frames per second. The new high speed camera retains all operating features of the Arri 16SR and is the first high speed camera with an operating noise level of under 32dB(A) at synch speed.

For further information, please contact: Arriflex Corporation; One Westchester Plaza; Elmsford, New York 10523.

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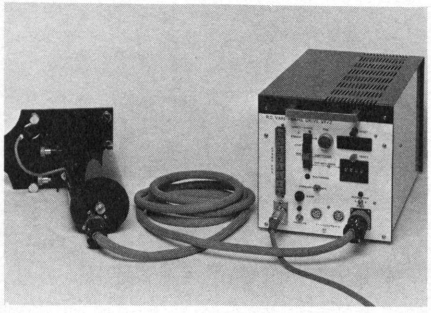

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Eight pre-set speeds can be specified, selected by push-buttons, ranging from .5 to 25 fps.

A four-digit electronic counter indicates the frame number reached, the count running up or down according to the setting of the forwards/reverse switch. A pre-determining function can be selected to stop the run at whatever count is set on the four-digit thumbwheel switches.

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for the normal two-pole buckle trip switch found on most cameras, causing the camera to be stopped either immediately the trip has been actuated, or as soon as the camera shutter has closed after trip actuation. There is a flashing light warning to indicate either that the buckle trip switch is open, or that the camera has stopped at the predetermined frame when this function has been selected. Two outlets are provided for accessories, which include Interval Timers, Lights switching units and electronic flash synchroniser.

For further information on sales, rental, price and delivery, contact John Carroll at Continental Camera Systems Inc., 7240 Valjean Ave., Van Nuys, CA 91406. Phone: (213) 989-5222.

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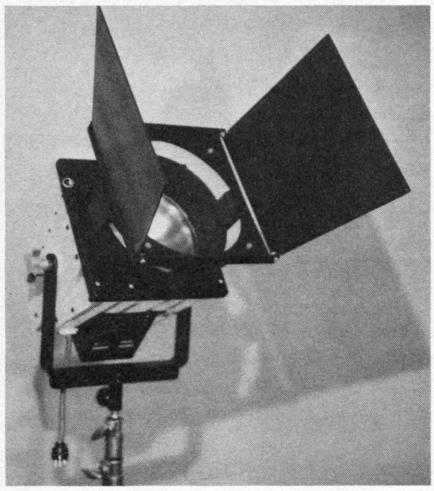

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Also newly introduced from Coollight is the Cool-2K. Because of its unique optical system, the Cool-2K (2000w) projects more light than a 2K of 5K Fresnel type of light, color corrected to 3200K and 5600K with a majority (90%) of the infrared and ultrared radiation being absorbed by the reflector, thus, making the light 90% heat free and focusable.

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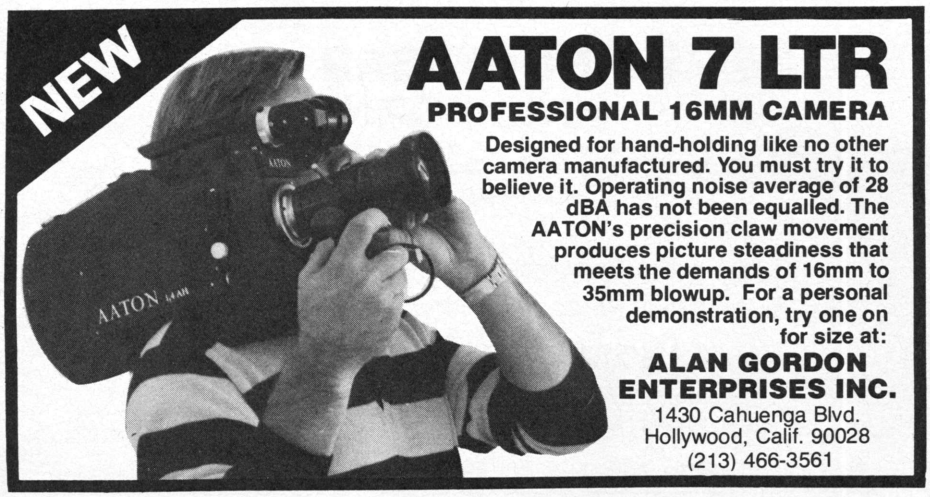

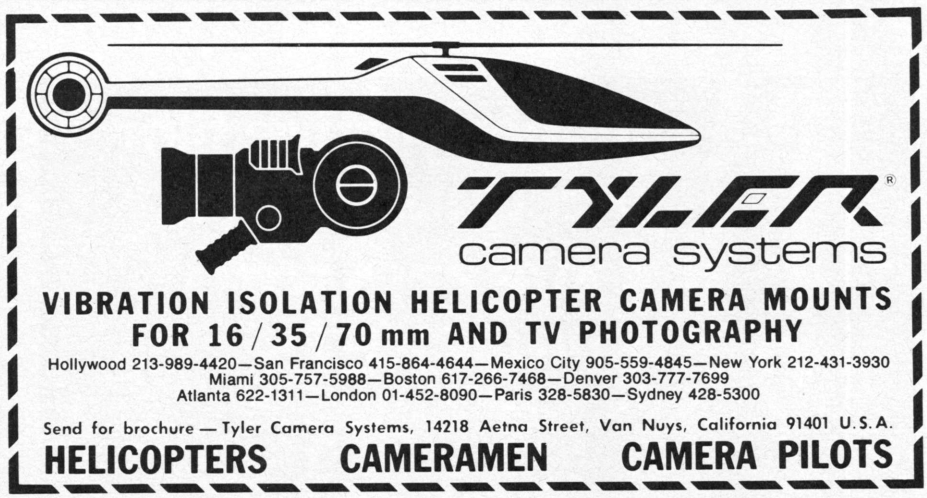

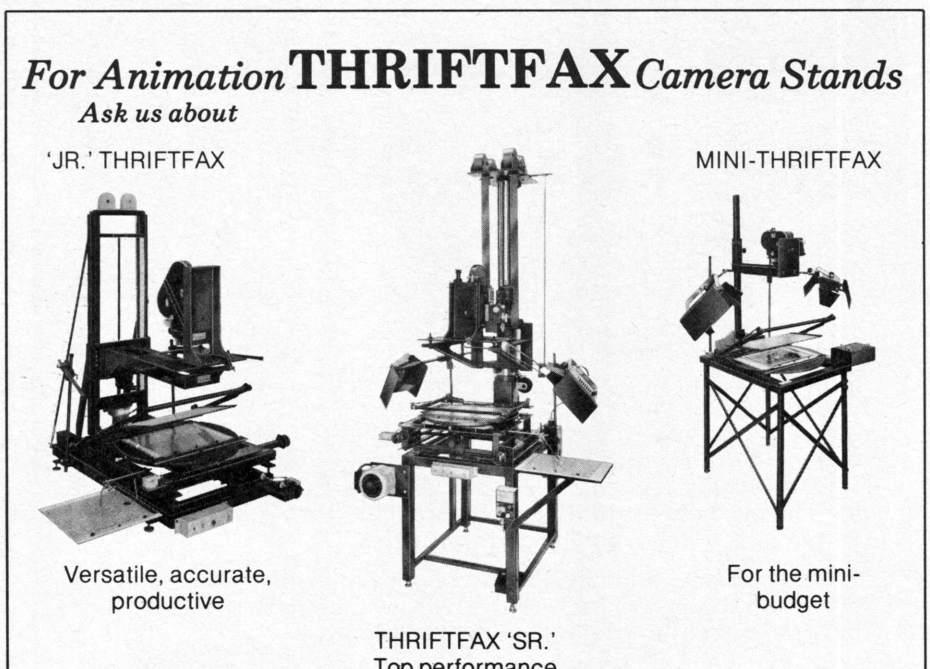

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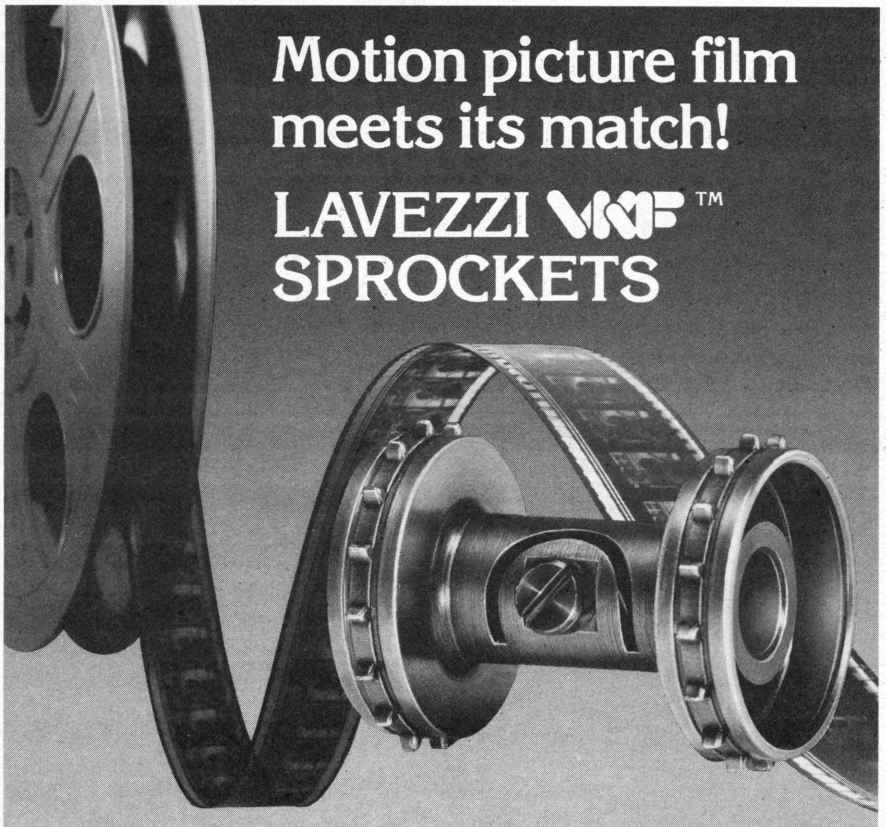

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Coollight is a California corporation and is located in North Hollywood. General Manager Gary Gross.

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According to Ed DiGiulio, President of Cinema Products Corp., the MNC-81A will be covered by Cinema Products' standard one full-year warranty (unprecedented in the broadcast industry) with no service charge ever for warranty work.

"Of course, there's nothing 'standard' about Cinema Products' service," says DiGiulio. "As all those who've had experience with Cinema Products' after-sales service well know—be it video or newsfilm—Cinema Products' consistent and dependable backup means extreme sensitivity and responsiveness to the needs of the TV-news industry, with downtime reduced to a minimum."

Prices for the new MNC-81A (camera head only, with Saticon tubes) start at $35,000 approximately. An attractive lease/purchase program is also available.

The MNC-81A is distributed exclusively by Cinema Products Corporation. For further information, please contact Don Dunbar, Vice President/National Marketing, Cinema Products Corporation, 2037 Granville Avenue, Los Angeles, CA 90025. Or call toll-free: 800-421-7468.

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NEW 16SR SHOULDER CUSHION

The new Arri shoulder cushion for the 16SR camera is now available. It is shown mounted to the camera and in the foreground.

This new Arri accessory is resilient, extremely lightweight, softly contoured to cushion the camera comfortably on the operator's shoulder, and allows the camera to be safely rested on its base without damage to either camera or resting surface.

For further information, please contact: Arriflex Corporation; One Westchester Plaza; Elmsford, New York 10523. ■

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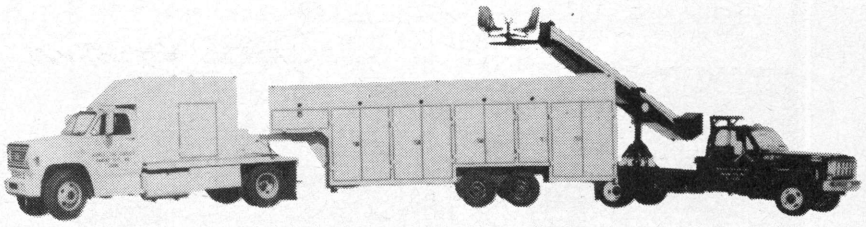

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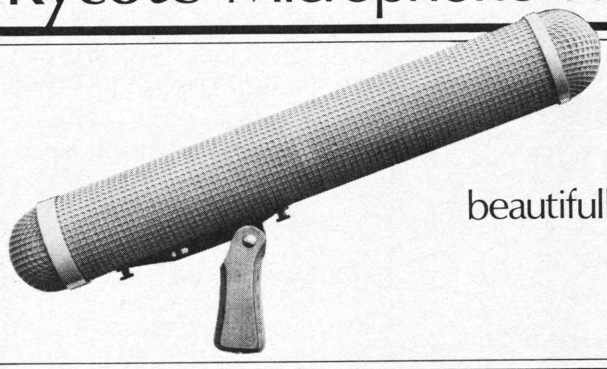

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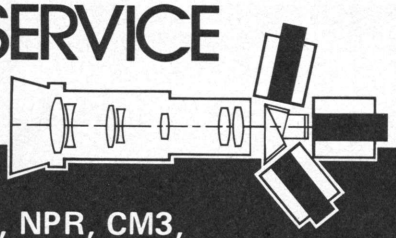

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INDUSTRY ACTIVITIES

EIGHT STUDENT FILMMAKERS FROM ACROSS THE NATION WIN HONORS IN MOTION PICTURE ACADEMY COMPETITION

BEVERLY HILLS, Calif.—The Academy of Motion Picture Arts and Sciences has named eight students from campuses in California, Illinois, Massachusetts and New York as the nation's top collegiate filmmakers for 1980.

Winners in the Academy's Seventh Annual Student Film Awards competition were feted in the public ceremonies held at 8 p.m. Sunday, June 8, in the Samuel Goldwyn Theater, Beverly Hills.

And the winners are:

Animation Achievement Award—John Lasseter of Whittier, Calif., attending the California Institute of the Arts, won with his 5-minute cartoon entitled NITE-MARE, about things that go "bump" in the night.

Experimental Achievement Award—Sean Phillips of Burbank, Calif., attending the University of Southern California, won with his 5-minute special effects film entitled SECTIONS. The film utilizes streak photography and optical printing techniques to obtain simulated computer-generated images.

Documentary Merit Award—Jonathan Wacks of Venice, Calif., attending the University of California at Los Angeles, earned honors with CROSSROADS/SOUTH AFRICA: THE STRUGGLE CONTINUES. This 50-minute color film paints a grim picture of life in one South African shanty-town under the stranglehold of apartheid white rule.

Documentary Achievement Award—Peter Ladue of Cambridge, Mass., and Roland Hallé of Bedford, N.H., both attending Boston University, won top category honors for their entry KARL HESS: TOWARD LIBERTY. Twenty-six minutes in length, this film examines the impact that two decades of changing American values have had upon writer-philosopher Karl Hess.

Dramatic Merit Award—Lisa Gottlieb of Chicago, Ill., attending Columbia College in Chicago, gained the Academy's recognition with MURDER IN A MIST, a 29-minute send-up of detective movies from the 1950's.

Dramatic Honorary Award—Randall Fried of Los Angeles, Calif., attending USC, won with HAPPY BIRTHDAY. In this gripping 28-minute film, a black

youth trying to climb his way out of the thetto must make a painful choice after he witnesses the armed robbery of his employer—by masked gunmen he is certain he can identify.

Dramatic Achievement Award—Claude Kerven of New York, N.Y., attending New York University, won top category honors for CANDY STORE, the tale of a likeable, but mentally retarded man, his brother, their confections shop and some petty mobsters with whom they become entangled.

Some Facts About This Year's Awards

Achievement Award winners received trophies and scholarship grants of $1,000 each. Honorary Award winners took home trophies and scholarship grants of $750 each, while Merit Award winners were given trophies and grants of $500 each.

The honors bestowed upon the films by Sean Phillips and Randall Fried bring to six the number of Academy Student Film Awards won since 1974 by USC. Claude Kerven is the fifth NYU student to win an Academy Student Film Award.

The total for the California Institute of the Arts now stands at four Academy Student Film Awards, while UCLA and Boston University are tied with three apiece. This is the first Academy Student Film Award won by a student of Columbia College.

The winning pictures in the 1980 Student Film Awards sweepstakes represented the best of more than 250 contenders entered by college and university students from across the United States.

This year's competition was highlighted by several firsts. John Lasseter became the first student filmmaker to win the Academy's competition in the same category for two consecutive years. Rolland Hallé, at 50, was the oldest student filmmaker ever to enter and win an Academy Student Film Award.

Also, this marked the first year that an honorary award was garnered by a student in the dramatic film category.

Awards were presented in the Sunday evening ceremony by writer-director Colin Higgins (SILVER STREAK, FOUL PLAY), actor Ned Beatty (SUPERMAN, NETWORK), director Arthur Hiller (LOVE STORY, MAN OF LA MANCHA), producer Michael Deeley (DEER HUNTER, MURPHY'S WAR), producer David Brown (JAWS, THE STING), animator T. Hee (PINNOCHIO, FANTASIA), and actress Susan Anspach (BLUME IN LOVE, FIVE EASY PIECES).

Presiding over the evening's festivities was mistress of ceremonies Fay Kanin, Academy president.

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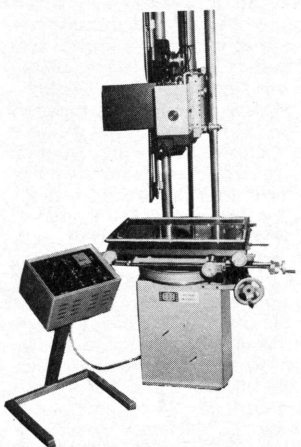

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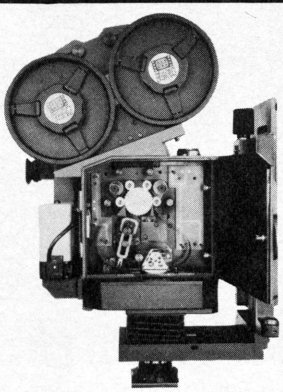

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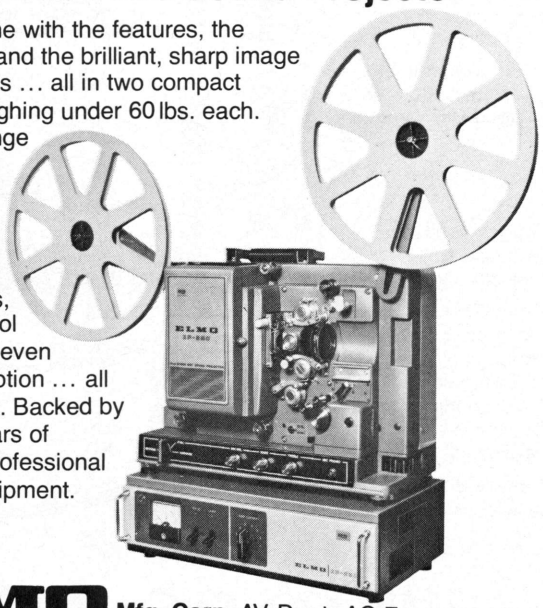

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PAUL FIERLINGER, Animator/Producer of "It's So Nice To Have A Wolf Around The House", by A.R.&T., Inc. Phila., Pa. for Learning Corp. of America. The film was nominated for an Academy Award as "Best Achievement In Animation, 1979."

The following remarks are excerpted from an interview we had with Mr. Fierlinger: "There is no machine on the market that I know of that has four sound heads. So it is practically a ten plate . . . . What I like about the ACMADE is that it's small, compact and it's very graphic. It's very clear. Everything is in one line . . . When I bought this machine from you I had this ten minute "WOLF" film to do-that was last year. Since then I've done about an hour of animation . . . so that the machine has paid back for me on the second film already . . . . The speed is incredible. The machine paid back for itself in a short time, not only in the money that I saved but also in the time saved . . . . Another important feature I should mention is the speed with which you can rewind. Go backwards and forwards. No machine can go that fast. And you can stop it on the button . . . . That is wonderful. The speed, the 24 frame, is absolutely accurate . . . . There is no wow to it or anything . . . . No machine is trouble free . . . the little adjustments that it needs . . . you can fix yourself . . You don't have to be a wizard . . . . I think I have used it every day of the year since the day I bought it . . . . I haven't had a mechanical problem with it yet.

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The Student Film Awards is a program of the Academy, the Academy Foundation and co-sponsored by The Bell System. Bell, as in previous years, will produce a compilation film of the winning entries and will release it in September for screening at no charge on campuses throughout the country.

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UFA ANNOUNCES CONFERENCE AND EQUIPMENT EXHIBIT

"The Future of Contemporary Media: Innovation, Accessibility and Influence," is the 1980 University Film Association (UFA) Conference theme. The conference has been set for August 9-13 at the University of Texas in Austin.

An equipment exhibit and literature display will be provided by sustaining UFA members and will be open Saturday and Sunday, August 9-10, from 9:00 AM to 5:00 PM. Exhibit Coordinator for this year's conference is the Professional Motion Picture Equipment Association.

Program Chairman Donald Pasquella (Southern Methodist University) announces an exciting thematic program with studies including multi-image, screenwriting, video disc, holography, and computer graphics. A pre-released film screening will also be presented each evening.

Further information may be obtained by contacting Donald Pasquella, Southern Methodist University, Dallas, TX (214) 692-3090 or the Professional Motion Picture Equipment Association National Office, University Tower, Suite 806, 6440 N. Central Expressway, Dallas, TX 75206; (214) 696-1448.

•

FILM ENTRIES FROM ACROSS THE NATION FLOOD THE JOHN MUIR MEDICAL FILM FESTIVAL

Over 150 film entries have been submitted to The Third Biennial John Muir Medical Film Festival, the only festival in the world to exclusively honor outstanding medical films produced for the continuing education of physicians, paramedical professionals, and community health education programs. Established in 1976, and sponsored biennially by The John Muir Memorial Hospital in Walnut Creek, California, the Festival will take place this June (1980), in that city's Civic Arts Theater.

Festival entries are categorized according to subject matter. Each category is then judged by a team of physicians,

nurses, and educators, as well as by members of the film industry. The films are judged according to their instructional, artistic, ethical and entertainment values. All films submitted have been produced since January, 1978, and are of 16mm optical sound and of exhibition quality (no videotapes accepted).

A Gold Walnut Leaf Award is given to the best film in over 20 medical categories. The Trustees' Award goes to the best overall film entered. Previous recipients of the Trustees' Award include: National Geographic's, "Man: The Incredible Machine" (1976), which aired on local and national public television to become the highest rated program in PBS history, and "Get It Together" (1978), the story of paraplegic Jeff Minnebraker, one of the advisors for John Voight's Academy Award-winning performance in COMING HOME.

At present, KQED-TV (San Francisco's Public Broadcasting affiliate) is seeking funding to produce a four-week series of one-hour programs which will feature this year's Festival's award-winnning films. The series will air nationally on PBS, following the Festival, summer or fall, 1980.

Festival plans also include the creation of "Filmex Medicus," a national archive and library, to review and catalog all available medical and health films, and to serve as a comprehensive resource center for medical students, hospitals, community health education programs, the media, and the general public. The archive would also critique and recommend appropriate audiences for specific films, as well as provide listings of film availability and location. When established, Filmex Medicus will be the only comprehensive service of its kind in the United States.

To further the educational impact and to extend the reach of these films, "San Francisco Magazine" will highlight the Festival in its June issue with a special 64-page section which will serve as the Festival's official program. 350,000 copies of this section will be distributed to every physician, hospital administrator, and director of community health education programs throughout the country.

Funding of the Festival was made possible by a grant from Mr. & Mrs. Thomas J. Long; Long is founder and former Chairman of the Board of Long Drugs. Support funding was provided by Dean S. Lesher, publisher of the Contra Costa Times. Sponsorship of film awards have been provided by The Walnut Creek Chamber of Commerce, Ethicon, Inc., a friend of the Festival who wishes to be anonymous, and the John Muir Memorial Medical Staff. Sponsors for the remaining Festival awards will be announced shortly.

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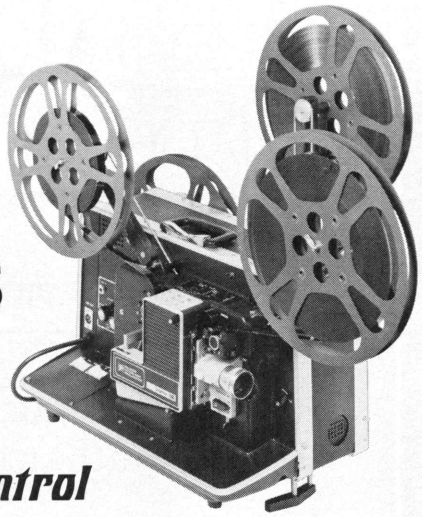

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QUEST FOR EXCELLENCE
Continued from Page 682

jection screens to penetrate a much larger segment of the marketplace during the 1980s.

In order to compete, the theatrical film industry must provide audiences with unique social and visual experiences. Audiences have to be entertained in ways that transcend going to plays or sporting events, or staying at home to watch TV even on a larger video projection system.

It's now typical for a producer to invest $5 or $10 million in the production of a theatrical film, and even more for promotion and distribution. It is no longer unusual for a producer to spend $20 to $40 million on the making of a film. Given that type of investment, very little, if anything, can be left to chance. High-powered research and development and sophisticated marketing and merchandising campaigns complement the production of many, if not most, movies.

The rewards are also great. It isn't uncommon for a successful feature film to gross $50 to $100 million in ticket revenues, and even those figures are being surpassed now. That doesn't account for additional revenues earned by the merchandising that accompanies many successful feature films. Given all of these realities, if you were producing or directing a feature film, wouldn't you want an Almendros, Fraker, Phillips, Rotunno or Storaro behind the camera?

On our part, we are proud that all of the movies nominated for Academy Awards for cinematography in 1979 were originated on Eastman color negative II film 5247. In fact, every feature film nominated for an Academy Award for cinematography during the past four years has originated on Eastman color negative film. We don't think that is a coincidence. Just as the nominees paid their dues, so have we. Our company invests more than a million dollars a day on research and development, and a good deal of this research is directed towards the making of improved motion picture films.

We work very closely with cinematographers to assure that our research is focused on what they think is important; just as we work with laboratories and postproduction houses on the development of intermediate and print films. In this way, we do our part to help bring the best possible product to the theatrical screen.

However, no one is more aware than we are that the cinematographer is the molder of the clay provided by the writers and directors. We just give them the material to record on. The image that appears on the movie screen is the result of

what runs through their cameras. This year's nominees exemplify the kinds of powerful contributions that a Director of Photography can make to the production of a superior film. All of them deserve our thanks as well as our admiration. ■

PERISCOPE SYSTEMS
Continued from Page 702

Its purpose is to prevent vignetting of off-axis rays. Its focal length has to be chosen to image the exit pupil, of P into the G-H relay. This system hasn't got the advantage of the external entrance pupil so a relatively large front mirror is required. However, it has the advantage of generally better image quality than when an eyepiece front end is used.

All of above applies when one uses stock optics. This is often a handy and expedient way to explore the advantages of a periscope lens system to cinematography. For the finest in image quality a custom design is required. This is done with the help of a large-scale computer optimization program. By means of such a program all of the parameters of the lens system are determined: individual radii, lens thickness, air spacings, and glass types. Detailed optical and mechanical drawings are prepared and the system fabricated. Time involved, from start of the design to obtaining the first unit is generally nearly 20 weeks.

In FIGURE 3, the optical schematic and ray path is shown for such a custom designed system. It uses the pupil in front feature and has a penta-roof prism to erect the image. It has an internal focus mechanism to focus from infinity to less than two inches. It is 25mm focal length, covers the Academy format, and is F/4.5 with continuous iris control to F/32. In the optical system are 15 lenses with 26 air glass surfaces, and one prism. The system is high efficiency anti-reflection coated with a transmission of 67% (includes the front mirror and erecting prism). Lens T# is $\frac{4.5}{.67} = 5.5$

FIGURE 4 shows the folding of the actual periscope. Distance from the mirror to the film plane is 27 inches. ■

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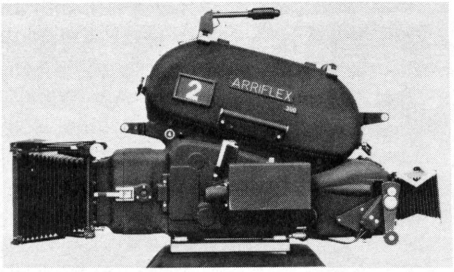

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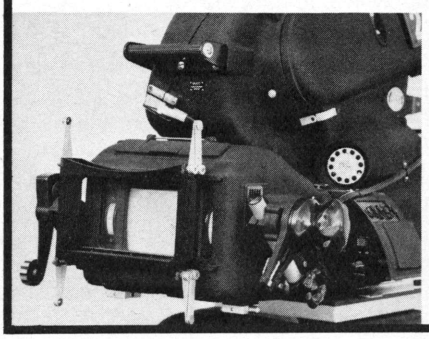

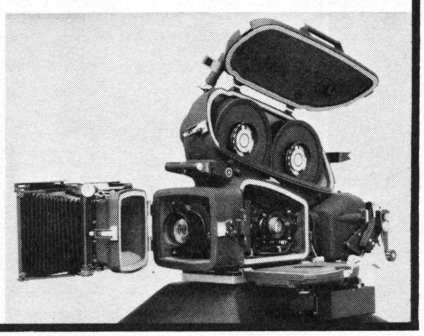

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THE ELEMACK STORY
Continued from Page 717

3'11" and the maximum 5'11".

If a lower lens height is required, a Snake bracket may be used, reducing the height by about two feet.

Greater height, reach, side-to-side movement and increased up and down movement may be achieved by the use of either the Jonathan crane arm or the Mini-jib. As a safety measure, as well as to ensure that a crane arm is not used in circumstances which might lead to instability and unsteadiness, a hydraulic relief valve is fitted which will prevent the column being raised if a weight greater than 310 lbs. is loaded onto it. It will also lower the column if too great a weight is loaded on while it is raised. In effect, this means that the dolly may be moved up and down when the Mini-jib is in use, but not with a Jonathan-jib.

Another improvement incorporated in the Cricket is the provision of all-around platforms above the wheels. These may either be used by the crew to stand on or to place the camera battery on.

As with the later models of the Spyder, the Cricket is provided with wheels that may be run either on a smooth surface or on straight tracks. (When curved tracks are used it is still necessary to change to bogey type wheels.)

When I visited the factory in Rome recently, Sante showed me a prototype of an articulated bogey wheel which should revolutionize the manner and ease with which either dolly may be run on straight or curved tracks. By gearing the leading bogey wheel to the rear one, he has made a system whereby the front wheel steers the rear one around a curve, thus curing a fault which has deterred many dolly grips from using curved sections of track.

When we were discussing the problems that occur in the field, he remarked that cameramen are sometimes unfair when they sit on one side of an Elemack dolly without adequately counterweighting the other side and then complain that the dolly will not track straight or accurately. He pointed out that if a great deal of weight is put on one side of the dolly only, it is bound to compress the wheels on that side more than on the other side, making them have a fractionally smaller diameter than those with less weight on them, so, of course, it will tend to want to go around a corner. The cure is to make sure any crew sitting on one side of the dolly are properly counterweighted. Incidentally, those Elemack counterweights weigh 50 lbs. each.

Another operational tip he gave me is to set one of the legs to the closed posi-

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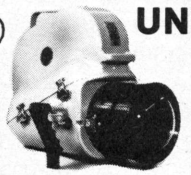

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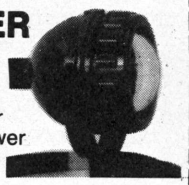

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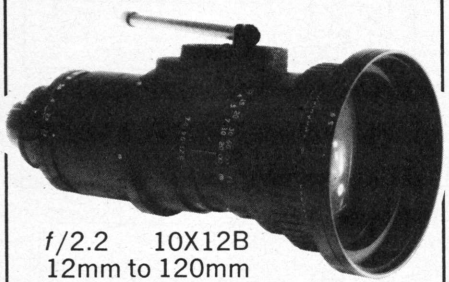

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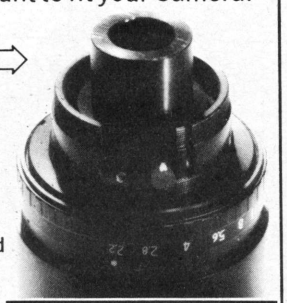

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tion when it is desired to steer around a tight circle. Set in this manner (see illustration) the wheel will navigate around a five-foot circle without scuffing.

In London, we are just introducing yet another Elemack innovation, a new type of track which has a shouldered profile to give it a flat top. This means that the track wheels, instead of bearing on only a very narrow section of track, can now spread the weight across a wide area, making it much easier to push a fully-laden dolly. It now takes approximately half the amount of force necessary to start the dolly moving and to keep it rolling thereafter.

At the same time, we have made it possible to fold the new track by lozenging the two sides together. Not only does this make for easier transportation and handling on location, but it also means that one type of track can be used either for 62 or 36 cm. gauge (i.e., with the wheels either spread out to their maximum or set close together) without any hassle. Indeed, the dolly grip only has to open the track out to approximately the correct gauge, put the dolly on it and it sets itself automatically. Available in 3, 2.3, 1.6 and 0.9 meter (9.84, 7.54, 5.25 and 2.95 ft.) lengths, it really is sensational.

Sante Zelli's phenomenal success with the Spyder Dolly did not happen overnight, of course; neither has he maintained his market leadership by sitting on his laurels.

As a young man, Sante went to evening classes after his normal day's work to study Engineering Drawing and Design and later became an aircraft engineer. Among the jobs he did in the Italian Air Force was to fit and service cameras in aircraft—learning skills which stood him in good stead when he left the service in 1943 to become head of the Mechanical Department of Rome's giant Cinecitta film studios.

For the next twenty years, Sante built cinema projectors, radar aerials for ships in the Italian Navy, Westrex studio sound equipment and so on.

One particular job he remembers was designing a special "back-to-back" projector for use in an ancient building where there was insufficient space to mount two separate projectors in the conventional manner. He solved the problem by constructing a left-handed projector fitted to the back of the regular right-handed one. Not only did he have to make a reversed mechanism, but also had to construct a Westrex sound head to cope with a track on the opposite side of the film.

From 1955-1957 Zelli worked as Chief Design Engineer with British Acoustic Films in London, which became Rank

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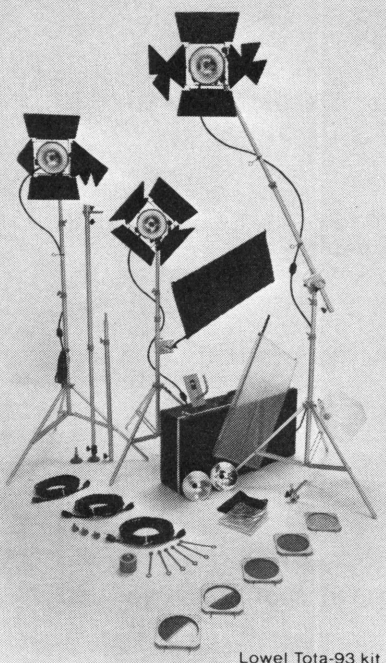

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Precision Industries during the period he was working for them.

Upon his return to Italy he worked on the film BEN HUR, which was shot in Rome, for which he built a very large model ship, incorporating all the movements of a vessel at sea.

The Production Controller of BEN HUR asked him if he could make a special dolly for the production, incorporating a camera support which could be raised and lowered as necessary. As a result of this development, for several years, Sante made dollys with separated hydraulic columns—until it occurred to him that the wheels could be attached by arms directly to the hydraulic reservoir of the central column—and the Spyder was born.

By that time Sante was making a wide range of cinema equipment and had formed a company to do ELECtrical, Mechanical and ACoustical work, hence the title ELEMACK.

Into his very modern factory in a suburb of Rome, Sante has installed row upon row of computer-controlled, automated lathes, milling machines, drilling machines and grinders, enabling him to keep the price of the Spyder at an economic level while increasing his engineering standards. Totally automatic machines, programmed either by Sante himself or by his son, Tore, machine parts to a greater accuracy and in a fraction of the time it used to take to make less precise products in the conventional manner. The result is that about the same number of men (about 35) have continued to be employed at his factory, but producing more items and at an economic price. A classic case of increased productivity paying off!

Sante Zelli is very much a working engineer. When I recently visited him with Jean-Marie Lavalou, one of the inventors of the Louma crane, to discuss a special dolly he is going to make for us, he was there on the shop floor, in his shirt sleeves, where the action is. At exhibitions, where Elemacks are demonstrated and sold, such as the BKSTS film events, *Photokina,* SMPTE or wherever, Sante is there also, on the stand, talking to customers, and taking the orders.

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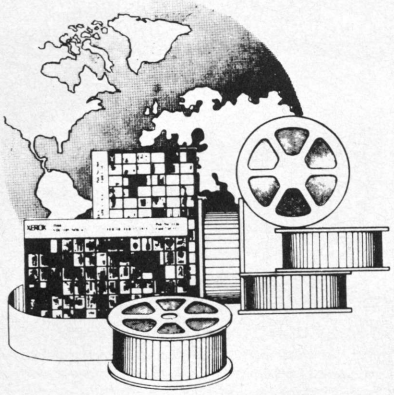

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PROCESSING FILM FOR THE WINTER OLYMPICS
Continued from Page 709

time presented an added challenge to news agencies servicing countries in Europe and Asia. Jim DeWitt, Kodak's coordinator of motion picture services at the 1980 Olympic Winter Games, explains significant technical advances in the last few years were of considerable help in coping with this situation.

One was Kodak's new Process RVNP (rapid video news process) which has reduced the dry-to-dry time for film processing to as little as 10 to 11 minutes. Also new since the 1976 Games is Eastman Ektachrome video news film high speed 7250 (tungsten) which has an exposure index of 400.

This greatly enhanced indoor and night-time cinematography possibilities and reduced the need for forced processing of news film. LaDuke reported that many of the news photographers also found the "fast" film ideal for covering sporting events where the pace was split-second. This allowed them to capture the action while holding depth of field.

"The volume of film processed at the Broadcast Center shows that the medium continues to play a major role in TV coverage of events like this," says LaDuke. "There was a mix of motion picture and electronic cameras covering the Games but film often got the call because of the mobility of the equipment and dependability, even under the extremely cold and often wet weather conditions.

"We have seen it time and time again," he explains. "That's why we felt it was so important to support that phase of the Olympic coverage. Many broadcasting organizations from countries around the world used film cameras to provide in-depth reports and profiles on individual athletes and ABC Sports relied on them for high-speed cinematography where slow motion action was desirable. The network's 'Up Close and Personal' profiles of the athletes were also filmed.

"There is a film-look that is very desirable for depicting people as warm and human," LaDuke notes, "and it is ideal for such personality profiles."

A Rank-Cintel flying spot scanner was available at the center for transferring the film to videotape for postproduction or transmission. Some overseas broadcasters opted to process and edit the film, airlifting it home. Others used the flying spot scanner to transfer to 3/4-inch videotape for postproduction and satellite distribution. "It was possible to shoot, process and transfer film to videotape for satellite distribution in only one or two hours," LaDuke says. ■

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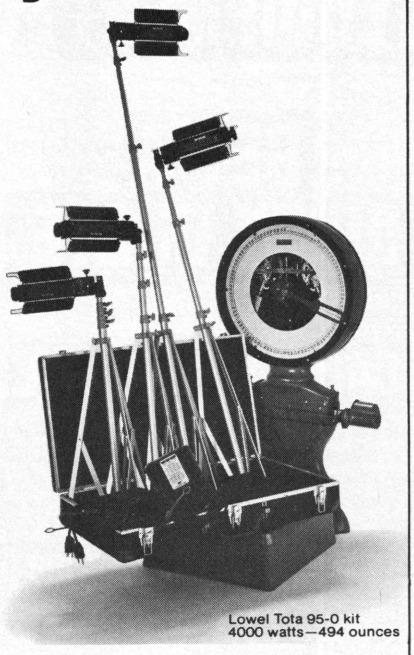

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ON LOCATION WITH "SOMEWHERE IN TIME"
Continued from Page 697

tion systems ever built.

There are 16 buildings in which the staff lives; a superintendent's residence, stables for 50 horses and the Grand Hotel's collection of carriages and wagons, a tool house, woodworking and paint shops, employee recreation rooms, and heating, electrical and refrigerating plants. The Grand Hotel's laundry turns out 8,600 pieces of laundry each day.

The staff totals more than 400; nearly one employee on hand to serve every guest. The kitchen staff numbers 103; the laundry staff, 43.

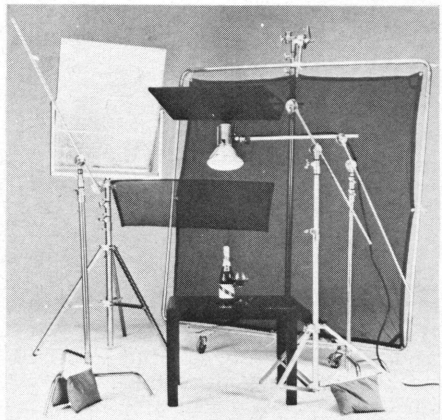
Inside the immense dining room of the Grand Hotel, as we arrive, the crew is busily setting up a dolly shot that will run a couple of hundred feet. I am introduced to the young Producer, Stephen Deutsch, whose first feature this is. He is very high on the project, obviously tickled to death to see it coming to life before his very eyes. Then there is Jeannot Szwarc, who welcomes me aboard with Gallic warmth. Bustling about behind the cameras is Director of Photography Isidore Mankofsky, ASC, whom I haven't seen since I visited him on the set of THE MUPPET MOVIE. He is bubbling with enthusiasm, delighted to be doing something that offers such a vastly different challenge.

The affable Christopher Reeve, whom I had met in England during his SUPERMAN period, extends a cordial welcome. In period costume and radiating good humor, he waits off-stage surrounded by adoring local people (mostly teenage girls) and cheerfully signs autographs for them and poses with them in front of countless Kodak Instamatics.

Then I am introduced to the ravishing Jane Seymour, playing the role of the young actress in SOMEWHERE IN TIME who reaches out across the years from her time frame of 1912 to reunite with her one true love. She is a classic English beauty, with emphasis on the *class* and, having read the script, I would say that she's exactly right to play the ethereal heroine of this film.

Once the set-up is complete, Isidore Mankofsky takes a moment to chat with me. He is full of praise for his gaffer and the electricians who have managed to place the many lighting units needed to illuminate the vast dining room. "They had to rig all this between meals," he tells me, "and they had to find a way to hang all those lights without pounding nails into the beautiful woodwork."

After watching the crew shoot the dolly shot, which takes in a couple of hundred



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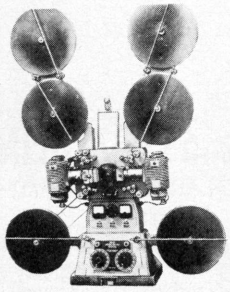

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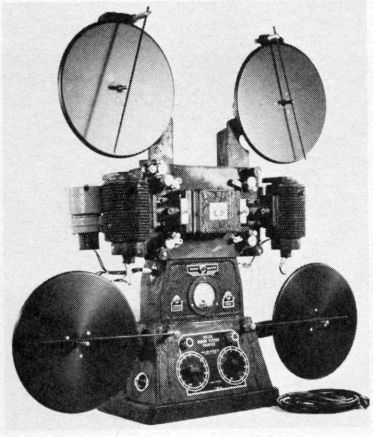

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feet of the lengthy dining room, we check in at the Inn on Mackinac, where I am to be quartered along with 125 members of the company, since there is not a room to be had at the elegant Grand Hotel. The rooms at the Inn are clean, comfortable and characterized by a kind of no-nonsense decor, but the building reminds me of the dorms of my college days, and I understand that it was exactly that during one of its previous incarnations.

The next morning I am given a tour of the complex of which the Inn is a part, and this excursion really boggles my mind—for here, on this lovely time-stands-still island in the remote reaches of the Great Lakes country, far from any sizable metropolitan area, there exists a full-blown motion picture studio, complete with a huge sound stage, carpentry and set construction shops, projection rooms, a large wardrobe facility, makeup rooms, an 800-seat legitimate theater, cutting rooms and a television studio. In short, everything that is needed to film scenes for a major feature.

Why?

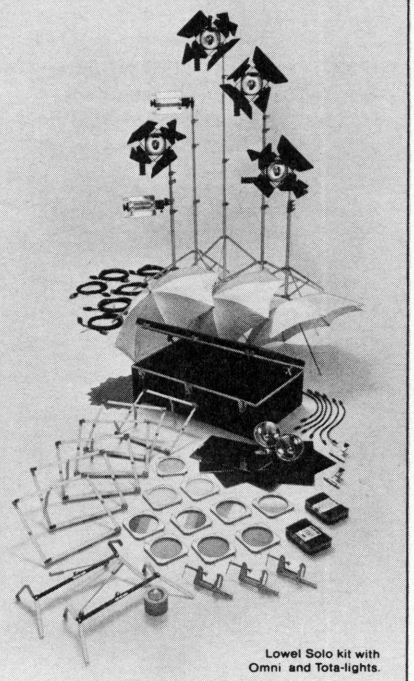
I'm told that the complex was built during the 1950's as a production facility for Dr. Frank Buchman's Moral Re-Armament Crusade, a religious-political organization that sought to spread its evangelical message throughout the world by means of motion pictures and television. After making only one feature film in this facility, the group abandoned it and reorganized in Switzerland. During the 1960's the complex became the headquarters for Mackinac College and the sound stage was used as a gymnasium (the basketball standards are still in place). Later the entire complex was turned over to commercial resort entrepreneurs.

That such a facility exists is a godsend to the SOMEWHERE IN TIME production company. It means that the entire action of the film can be shot on the island and that cover sets will be available whenever the weather rules out exterior filming. The sound stage is larger than many of the stages in Hollywood and there is a lot of excellent lighting equipment (with MRA stencilled on it) still mounted overhead.

In the construction department and on the stage sets are being built to represent period and contemporary suites of the Grand Hotel and the 800-seat theater is being revamped with Victorian elegance to represent the theater in the hotel where the actress played by Jane Seymour supposedly once gave a performance.

Later I explore the island on a bicycle and wave to Verna Fields, who is pedaling furiously toward me. It's very peaceful with only bicycles and horsedrawn vehi-

The real magic is in the performance.



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cles in the streets—and no exhaust fumes smogging the air. The downtown area features souvenir and fudge shops discreetly concealed behind Victorian facades, but it is the Victorian mansions, the rolling hills of unreal green, and the clouds of purple lilacs everywhere that give the island its out-of-this-world character. Mackinac really is a magical place—the perfect setting for a fantasy based on a journey through the time warp of another dimension.

After the shooting for the day is completed (with the windows of the dining room tarped off for a night effect), I join the company to watch dailies. The scenes look magnificent. The magic is on the screen. Viewing both contemporary and period scenes, I am aware of the visual differences created by the use of Kodak and Fuji stocks, respectively, as well as the varied approaches to lighting and the use of lenses. I have the feeling that this is going to be a beautiful film.

I spend a few more days with the company and then, reluctantly, I must leave this beautiful place. I ride out to the airport in a horsedrawn "taxi". The pilot is waiting for me. He says that our plane (a tiny two-seater) is in the air at the moment, being flown by a private pilot.

The plane lands. Out steps Christopher Reeve, the private pilot. I say goodbye to Superman and, silently, to this enchanted island. Then we soar off into the sky to connect with my 747 in Detroit.

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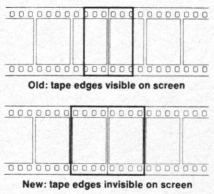

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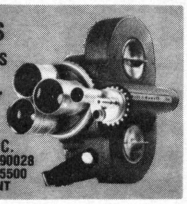

K2 SKI FILMS FOR THE WINTER OLYMPIC GAMES

Continued from Page 708

pinpointed everyone's location, and tried to anticipate any problems.

Since every contingency could not be anticipated, two-way radio contact was especially important. The sun's position, and the brilliance of reflections off the snow played tricks with light meter en, forcing a choice between shutter speed and depth-of-field. Decisions had to be communicated with split-second accuracy, often at moments of peak excitement.

Photographers were constantly changing camera positions to show how skiers handled different problems. This was a major difference in approach from television and standard documentary coverage. For example, cameras were set up at a site where skiers prejumped to clear a bump. Once that footage was secured, the crew moved to another location to record how skiers faced a series of small bumps and absorbed the resulting shocks. Another sequence focused on high-speed turns.

There were places where two cameras were grouped, one working at the normal 24 fps and the other at 200 fps. When the footage is intercut, K2 will have a springboard for discussing and illustrating how Olympic skiers handled difficult technical problems.

While East didn't interview any of the skiers, he did speak with many of their coaches and trainers to help develop insights. Part of the theme of the film was to show how the competitors perceive themselves. This objective was achieved by using the cameras to show attitudes as reflected in facial expressions and body language. "Words are not needed to show how a champion feels just before a race, and you don't need to explain how they psych themselves up," Chuck East explained after the Olympics.

"Gordon Bowker was helpful in guiding the scripts away from the standard 'ski film look.' This helped us create a different look for K2 and better television syndication for the films.

"The conclusion of our project for K2 was the Olympics film and, it was, by far, the most cinematic and enjoyable part of the project. It offers a pleasant, impressionistic view of the Olympics. K2 and Heckler Associates were totally supportive in helping us create such an alternative to the traditional 'winner-loser' viewpoint. We were allowed to present the emotion and spirit of each moment, which is often the only real excitement and reward for both competitor and spectator," East concludes. ■

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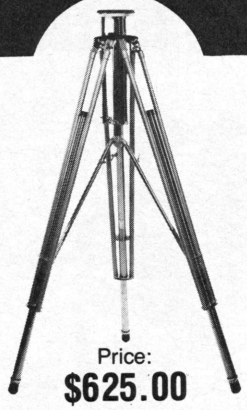

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BEHIND THE SCENES OF "SOMEWHERE IN TIME"
Continued from Page 701

nights to accomplish during off-hours on the hotel's busy convention schedule. Almost 8,000 square feet of colorful wall-to-wall carpeting was covered with rare Oriental rugs and expensive antiques for that rich look desired by director Szwarc, his art director, Seymour Klate, and set decorator Mary Ann Biddle. The moment the past had been captured on film, the hotel had to be returned to its original impeccable condition.

The dining room (almost 300 feet long, enabling Szwarc and cinematographer Isidore Mankofsky to pull off one of the longest interior dolly shots in history) was another overnight make-over. Original plans for shooting the area as soon as the hotel's guests had cleaned their plates were scuttled due to complexities in lighting the room and filling it with 178 unrehearsed extras, each assigned a personality to play at their respective dinner tables. There was a nanny with her young female charges, a corpulent Diamond Jim Brady with an intoxicating entourage, a table of retired admirals, a boxer and his manager haggling with a promoter for a match.

It was a thrill to turn back the clock for this first big 1912 scene, with all of the island "atmosphere people" sharing the experience in the debonair tuxedoes and priceless evening gowns of the period. The mood evoked the Grand's own celebrated past, bygone days when the reigning monarch of Chicago society, Mrs. Potter Palmer, held court amid the pure blue expanse of the Great Lakes to the great envy of her East Coast rival, Mrs. William Astor, who was said to glare westward with envy from her less spectacular perch in Newport.

Christopher Reeve saved his first peek at the past for the moment he was called to the set that night as Richard Collier. In less than 24 hours, he had to change his frame of mind as an actor from the alienation of the playwright in his own time to the giddy elation his character would feel upon reaching back 67 years to Elise McKenna and her lost world of gracious living.

His reaction exemplified that of the entire company: "The details—the love, really—lavished on the entire production, especially on that first big 1912 sequence in the dining room, establish the authenticity of the time and place, the wonder and beauty of it.

"My character goes through a lot of trouble, a lot of pain, to get from the present back to 1912. When he gets to the past, it had better be worth the trip." ■

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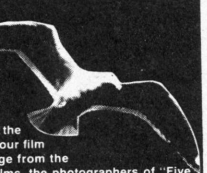
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FILMING THE IMPOSSIBLE
Continued from Page 713

overall when transferred to video tape for television use. Almost everything, except the cave diving story, was done in sunshine, where high film speed was never a real need. We rated almost everything at Kodak's recommended ASA, with 85 filters outdoors.

When possible, we tried to unload exposed film as soon as possible by air back to Florida or New York for processing. Mike Palma took responsibility for judging the quality of our various shoots and giving us reports in the field on any problems that sneaked in.

At the peak of production, we had to be the country's major user of lens tissue, lens cleaning fluid and compressed air cans. Working with fish slime, salt and freshwater spray, dust and the sheer quantity of film we ran through all the equipment meant constant attention to such details.

Overall the major factor in the success of both programs was in getting realism and naturalness into the segments. Non-professionals are very uptight in front of the lens. Even our hosts, although knowledgeable in the field as outdoorsmen, were not TV actors and had to be carefully directed.

Glen is especially skilled in relaxing a subject to make him feel completely comfortable. He would tell stories, jokes even, to loosen up a nervous subject.

Sometimes we would sit with only the Nagra running and chat with a subject rather than "interview" him or her in a news reporter fashion. These off-the-cuff bull sessions produced some of the best voice-over material that sometimes became the backbone of the story. Wild sounds and lip sync occasionally were sweetened with background music when the topic so indicated. It was a constant problem—to guard against falling into a groove that could easily become a rut!

Our goal was to not only make good films but to tell worthwhile stories with a strong theme. It had to be honest and it had to be interesting without compromising in any area. If the World hands you lemons, make lemonade. So if we started out with one theme in mind and the situation in the field changed, we changed. It didn't always work, but we usually could salvage a long, expensive shoot by coming away with something worthwhile for one of the shows.

Typically, a seven-minute target length would involve around 5,000 feet of ECO or 7247 Negative. One shoot on a women's bass tournament wound up with 9,000 feet of Negative on the shelf and only six minutes on the air. More often we could keep close to a 10 to 1

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At no time was it seriously considered that we abandon the 16mm film format in favor of video tape in the field. It just wouldn't work for our type of wide-ranging outdoor shooting. Lau Productions specialized in high-speed and underwater actions where VTR just isn't feasible.

We did have to learn to live with video tape transfer work which was completed at Communications 21 in Jacksonville for the OUTDOORSMAN Series and our commercials, and at WESH TV-2, Orlando, Fla. We pushed both VTR houses to the maximum to get the quality we demanded for the finished products which were air-shipped to NET in Ann Arbor, Mich., for duplication and distribution to the many TV stations carrying the programs.

Deadlines were so close—within hours at times—that personal carriers hand-delivered master 2" quad video tapes to Michigan where they were standing by to dub and distribute.

Doing 65 half-hour shows involving 195 different segments within six months extracted a tremendous personal toll. Nerves were frayed. Crews were pushed to exhaustion and so were budgets. But the job was done. Deadlines were met and national ratings on both shows were good. At this writing, plans are well along for 26 new shows for next year for both SPORTS AFIELD and The OUTDOORSMAN Series.

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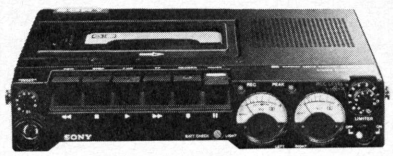

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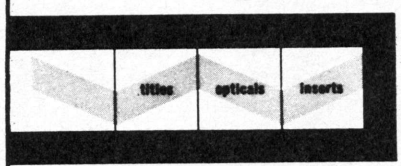

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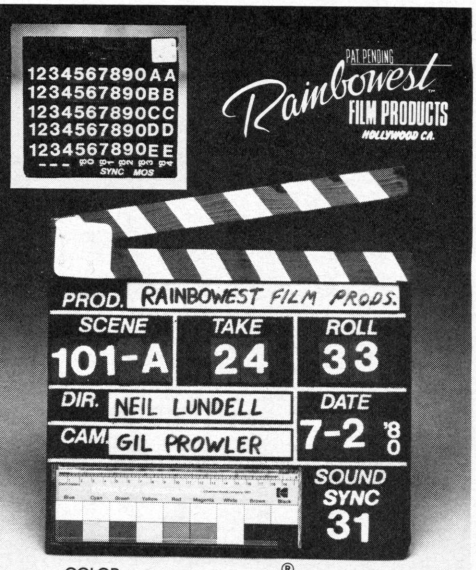

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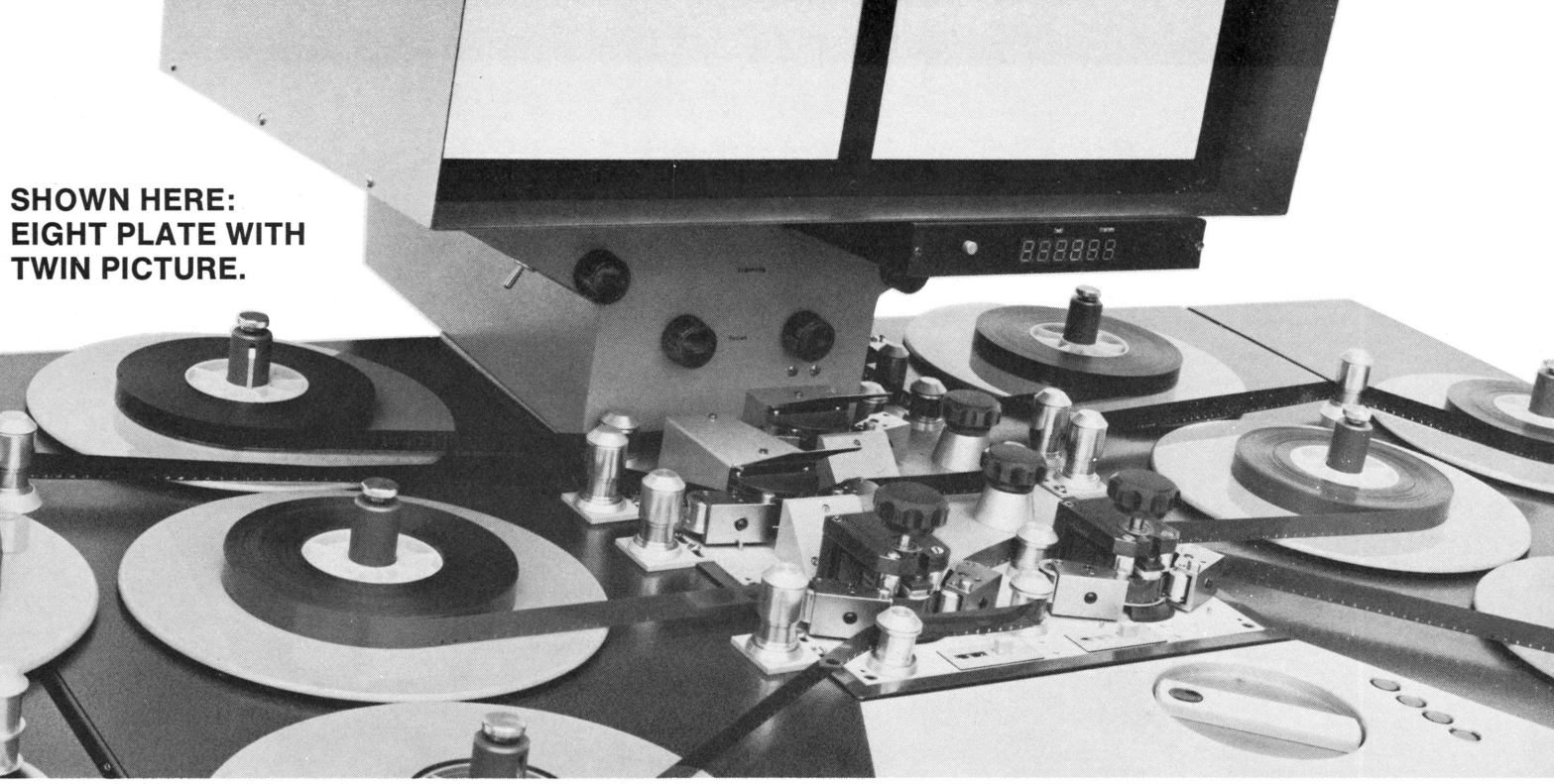


New KEM RS-2: a compact system with twin picture module and 24 sided flicker-free prism in 16mm. And switchable aspect ratios in 35mm.

Simple to operate: *One* control lever; and manual inching in sync, like a synchronizer.

An example of RS-2 versatility: suppose you have one set up as a 16mm eight plate, with the twin picture module.

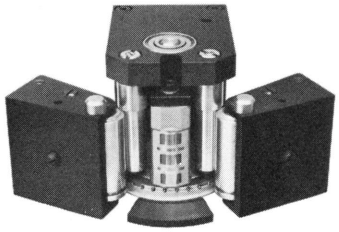
Officially, that's two picture and two sound tracks. But with the built-in optical/magnetic reader, you can run one picture and three mag tracks. *Without changing anything.*

Now put that same 16mm twin picture module on a *six* plate RS-2. You get two picture, one sound—or one picture, two sound tracks.

Interchangeable.

And every RS-2 will accept 35mm picture and sound modules. If you shoot 35mm occasionally, there's no need to get another machine to edit that. You can rent a 35mm module when you need one.

Or you can rent out *your* 35mm module while you're working in 16mm. Or, when you're ready, you can buy a second RS-2 with *no* picture or sound heads at all. Six or eight plate...



Why you can thread the RS-2 faster than any other machine: Single sprocket drive.

In each path, a single sprocket wheel drives the film. *That's one less to thread.* In both 16mm and 35mm, picture apertures and sound heads are mounted on the sprocket drive. (Various sound heads are available; shown above is a 35mm three-stripe.)

To thread, you drop the picture or mag film into position, jiggle it to engage the perfs—and then just *pull the film*. That makes the gate shoes click into place. No need to touch them.

Manual inching.

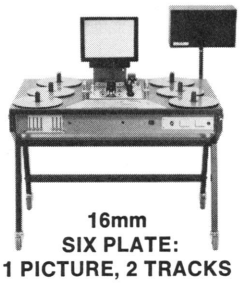
Big, handy inching knobs are mounted on each transport path. You can inch manually with all three (or all four) transports in sync—or out. Each sound transport has its own frame counter. And each path has adjustable sync points.

Engineering.

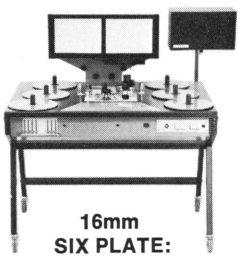
German precision; and dependable simplicity. When you check out the other machines, ask to look *inside*. Then look at the KEM.

EAST OF THE ROCKIES:
MM Editing Systems Inc.
230 Park Avenue (at 45th St.), Rm. 339, N.Y. N.Y. 10017 (212) 697-5865

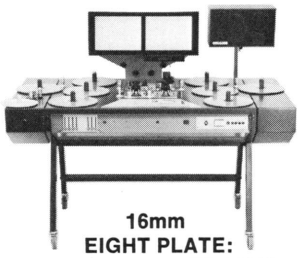
WEST COAST AND TEXAS:
KEM Editing Systems Inc.
7237 Santa Monica Blvd., Hollywood California 90046 □ (213) 850-0200



16mm SIX PLATE: 1 PICTURE, 2 TRACKS



16mm SIX PLATE: 2 PICTURES, 1 TRACK



16mm EIGHT PLATE: 2 PICTURES, 2 TRACKS

35mm SIX PLATE: 1 PICTURE, 2 TRACKS
Academy, 1.85:1, Anamorphic.

KEM

X-N-09/8C-CCCJ-C00056898-001
008-CC7-94590-000005
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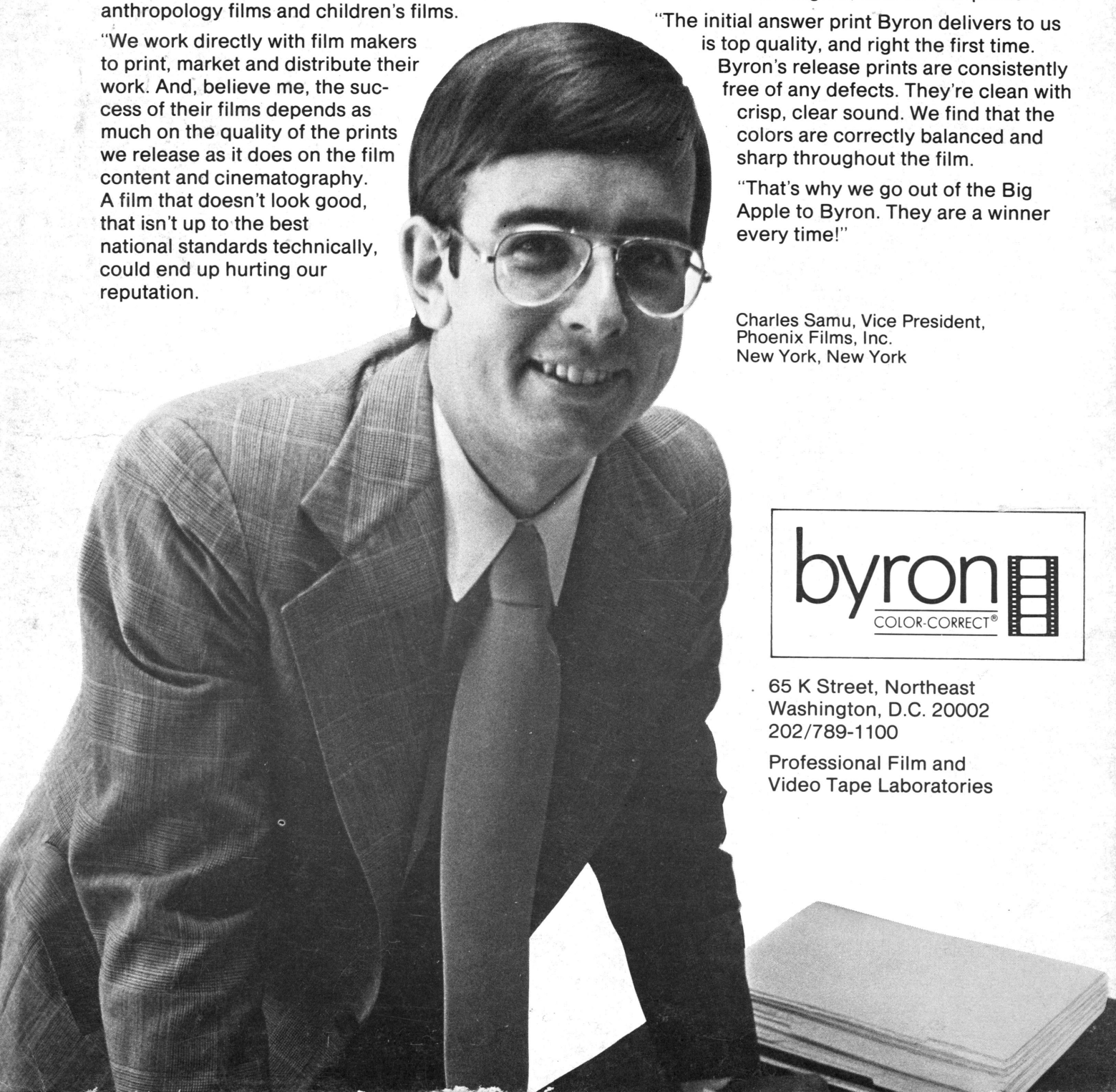
"That's why we go out of the Big Apple to Byron. They are a winner every time!"

Charles Samu, Vice President,
Phoenix Films, Inc.
New York, New York



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